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AMSTRAD PCW 8000 PLUS

8256 • 8512 • 9512

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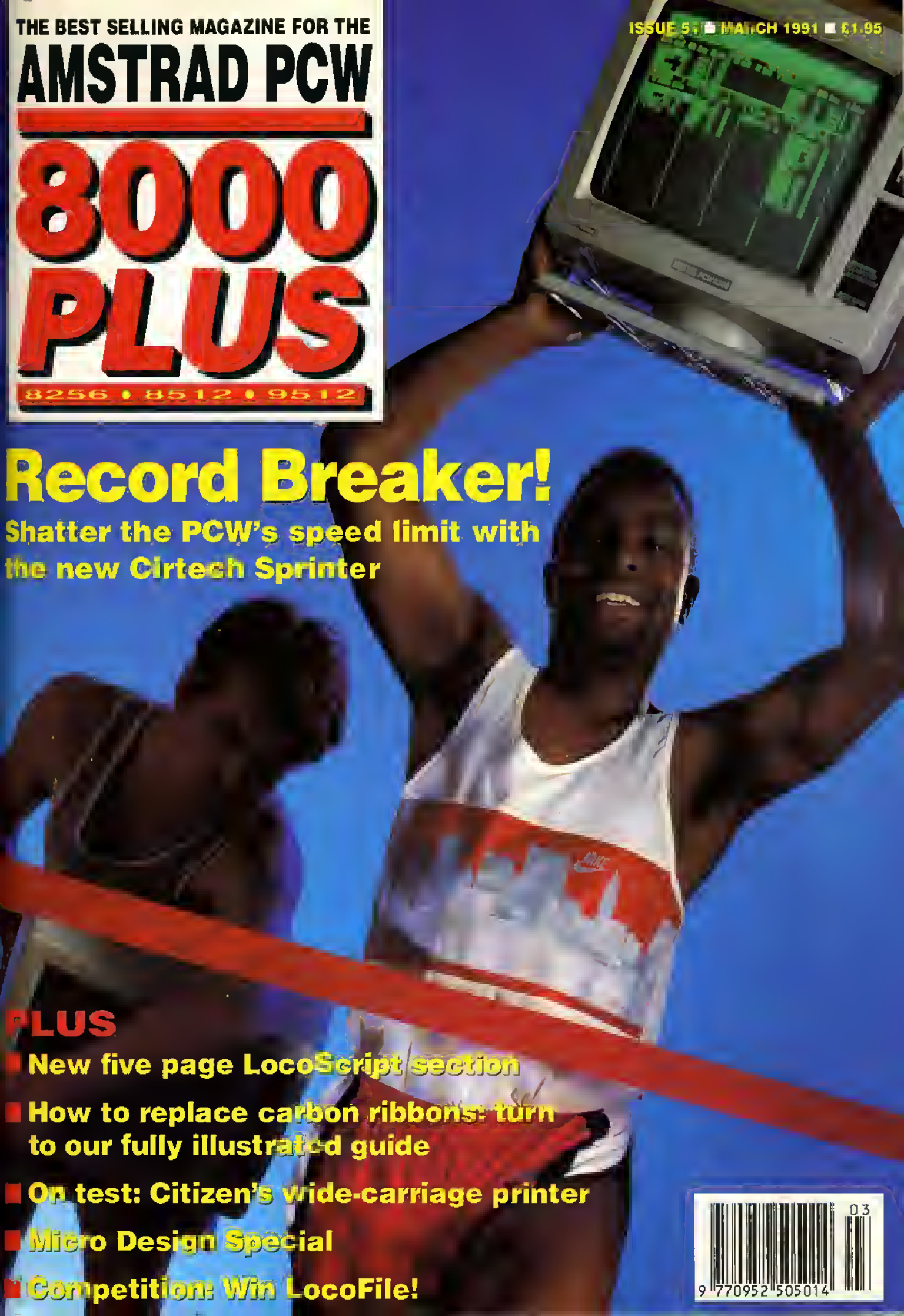

Record Breaker!

Shatter the PCW's speed limit with the new Cirtech Sprinter

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- New five page LocoScript section
- How to replace carbon ribbons: turn to our fully illustrated guide
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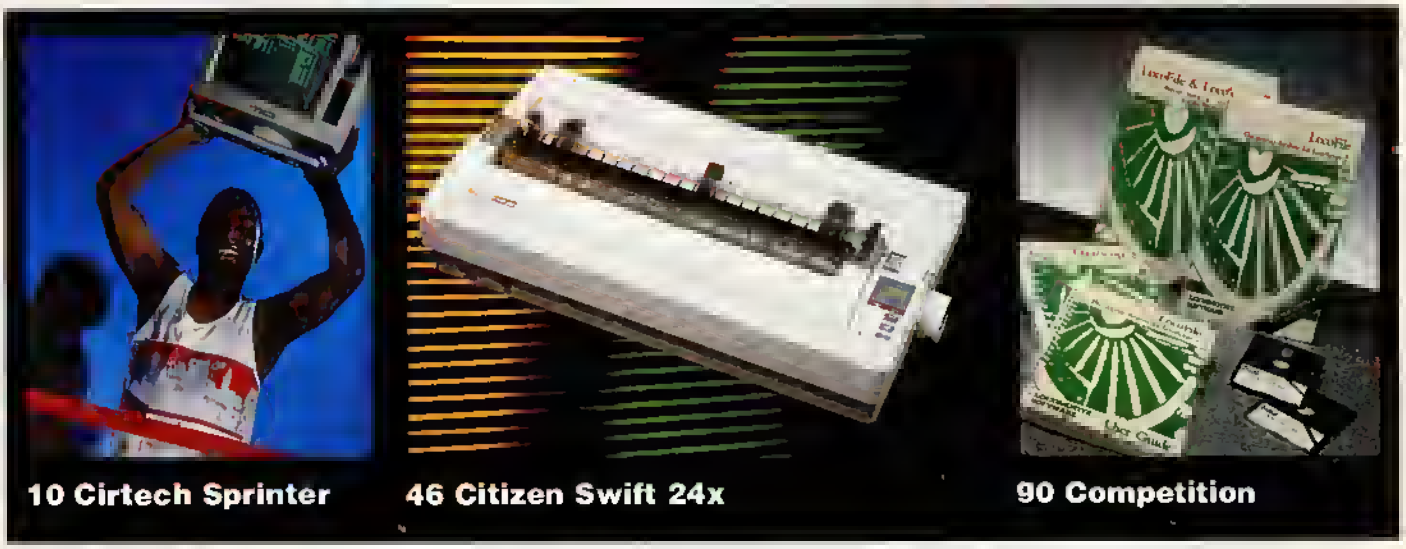

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TEL • 0626 334545
PRINTED AND BOUND BY CHASE WEB, St Ives Company, St. Austell, Cornwall
DISTRIBUTION (UK and EIRE) MMC Ltd
TEL • 0483 211222
(OVERSEAS) COMAG Ltd TEL • 0895 444055

FUTURE PUBLISHING, THE OLD BARN, SOMERTON, SOMERSET TA11 7PY.
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MAIL ORDER QUERIES Kelly Porter

SUBSCRIPTION ENQUIRIES Christine Stacey
TEL • 0458 74011

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ABC – Jul – Dec 89 – 27,021

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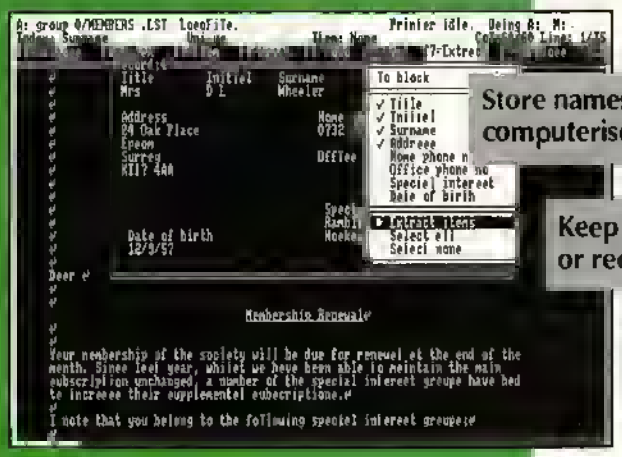

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Individually LocoScript 2 costs £29.95 and LocoFile costs £34.95

All things come to those who wait, as the saying goes, and the PCW-ing public's five month vigil for the arrival of the Cirtech Sprinter is certainly no exception to that rule.

The revolutionary PCW accelerator pack has finally made its way to the offices of 8000 Plus, and, as our review on page 10 reveals, it has been well worth waiting for. The Sprinter can almost double the speed of PCW performance, elevating it to the league of its pricier peers with the greatest of ease. Now, all those time-consuming tasks which tarnish the PCW's credibility as a 'serious' machine – such as booting up, loading and editing documents, can be carried out at lightning speed. Turn to page 10 for the full report!

Speed is also of the essence when it comes to learning how to use a new program. This month's new LocoPlus section helps you on your way to a faster – and more comprehensive – grasp of the PCW's native word processor, and we've a brand new tutorial series on the database member of the Locomotive software family, LocoFile. Don't miss your chance to win a copy of the program – we've got three to give away in this month's Back Page competition.

And, for those of you who need to replace 9512 carbon film ribbons but cannot wait for a new cassette to come through the post, we've a special, step by step guide to carrying out the task in the comfort of your own home.

And that's not all – we've got a wide-carriage printer from Citizen on test, and a flight simulation program to put through its paces. So, it's on your marks and get set for an action-packed read!

NO MORE PIGGY BACKS?

New 'all-in-one' pack set to solve PCW add-on crowding

'Clip-on' accessories have become a definite trend for the PCW, and now Cirtech, makers of the Diamond hard disc, the Hardpak and the new Sprinter (reviewed on page 10 of this issue of 8000 Plus), claim to have invented the ultimate product of the genre. As the saying goes, one can never have too much of a good thing, and their new development, called Matrix, aims to prove this point once and for all.

It will provide - believe it or not - a hard disc, a mouse, extra RAM memory, a serial RS232 port, a parallel printer port and an even an external video port...all in one pack.

This could mark the end of the much-maligned piggy-back crisis, where a host of PCW add-ons waver precariously in any passing breeze, and frequently collapse altogether. Far better, say Cirtech, to have all your add-ons together - and, at £343 for the lot, they might well be right.

The piggy-back problem is a common one for PCW owners and Cirtech say that the production of Matrix was inspired by the difficulties they themselves encountered in their workshops.

Matrix has a through connector just in case there is something else you want to add on, such as a ProSCAN interface.

The miniature hard disc is 20 Megabytes and self-booting, just like Cirtech's HardPak. The mouse provided will be based on the popular AMX, and the additional RAM size can be between 256K to 1024K.

Cirtech cite this as a "radical, new approach to the problem of multiple interfaces on the PCW." They say that Matrix is in the final development stages and should be on the warehouse shelves in April. 8000 Plus will be reviewing the new product in the near future.

A 20 Megabyte Matrix module will cost from £343.00 (including VAT). Further details can be obtained from Cirtech on (0835) 23898.

SONGS OF PRAISE

Need an Easter hymn from the Mission Praise hymnbook? Or maybe a hymn on the topic of Christian love from the Celebrational Hymnal?

This kind of choice is one which faces the nation's clergy at least once a week. But now the PCW can help, thanks to a new product called Hymnboard.

Hymnboard is a catalogue of over one thousand hymns based on popular collections such as the Ancient and Modern Revised, the Mission Praise and the Celebration Hymnal. Reverend Komor, who compiled Hymnboard, says that it can be used in a variety of ways. The list includes the hymn number and, wherever possible, indexes the hymn under theme and season as well.

Hymnboard comes in the form of a database file rather than a self-contained program, and is available for use with either Masterfile or LocoFile. To ensure that users of other databases don't miss out, it is also available in ASCII format.

To obtain a version of Hymnboard (available for all PCWs), contact Reverend Komor at 8 Illtyd Avenue, Llantit Major, South Glamorgan, CF6 9TG for an order form. Alternatively, send a blank disc to the above address, together with a cheque or postal order for £10, and a copy of the program will be yours.

THE SOFT TOUCH

This month brings good news for all those who regard their PCW as the ultimate writer's tool - but blame the PCW's native keyboard for creative block.

Pan Euro have just unveiled a brand new product: a supremely comfortable Tecniche keyboard, which compares very favourably with the standard models which complement far more expensive machines.

This is the first 'alternative' PCW keyboard, and the Tecniche's arrival on the scene should gladden the hearts of many an aspiring touch-typist. Obviously aimed at the luxury market, the new model has keys that respond to the lightest of touches, allowing the fingers to fairly fly along.

The keyboard should be of particular interest to 8256 and 8512 owners. The benefits of a luxurious - rather than purely functional - keyboard are unlikely to be lost on them. With this release from Pan Euro, all PCWs - not just the 9512 - can have a high quality keyboard.

Further creature comforts incorporated into the new model include extras such as eight function keys, rather than the standard four.This means that rather than pressing, for example, [SHIFT][f1] there is a specific [f2] key, making life much easier for regular LocoScript users

Also a separate numeric/cursor pad can save time, particularly when entering long lists of figures, since the digits are all in one distinct area of the keyboard. Alternatively, the keypad can be set to provide scrolling keys, making word processing an easier task.

There is no special installation process for the Tecniche:the usual socket at the side of the PCW is used. It could well tempt 9512 owners away from their far more commodious keys with its springy feel, and smooth contours.

Pan Euro can be contacted on (0925) 234170. The new keyboard is priced at £90.85 including VAT. Watch out for a full evaluation in next month's 8000 Plus.

Let your fingers trip the light fantastic with this brand new 'alternative' PCW keyboard

by Karen Donaghay

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LEARNERS, PLEASE!

In his free time, Chris Bryant has an unusual hobby - he helps other PCW owners to throw away their L-plates.

Chris's PCW help-line was first given publicity in the December issue of 8000 Plus and the 'phone hasn't stopped ringing since. This is all well and good but, according to Chris, not all of the calls are from bona fide beginners. Tut tut!

Being a charitable sort of chap, Chris is quite happy to continue his service but wishes to stress that it is only for those who have had a PCW for less than three months.The helpline was set up specifically to assist absolute beginners with early PCW teething troubles.

The hours to call if you require help are between 8.30pm and 10pm weekday evenings and between 6pm and 10pm at weekends. The helpline number is (0297) 20456, and the service is completely free.

DOCTOR ON CALL

All PCW owners with ailing discs will be pleased to know that Mark Wallis is back in business after a spell at college. His data recovery service costs £20.00 per disc (including postage) and he offers a 'next day' service.

All discs must be sent in a good quality jiffy bag to Nottingham Data Retrieval Services, 173 Trent Boulevard, West Bridgeford, Nottingham, NG2 5BX. The number to ring for further information is (0602) 813790. He also welcomes general enquiries on Pascal programming, LocoScript and Professional Adventure Creator - but by letter only please.

DESK-TOP SHOPPING

Shopping at home has its advantages, but the main problem for the consumer is that they only get to see their purchase when it arrives on the doorstep. SBS Computer Supplies have tackled the problem by supplying a full colour catalogue on request. It is called, appropriately enough, the Amstrad Catalogue, and is free of charge from their offices in Brighton.

The latest products include a hideaway desk for the PCW - especially good for those moments when you and your machine are not seeing eye to eye. The three parts of the desk simply fold away, making it an ideal space saver. The desk costs £139.

Also featured in the catalogue is the System Solver, a computer desk and chair. You can also obtain a matching office desk, pedestal and chair for £149.95, a matching bookcase for £29.95, a matching printer unit for £79.95, and a link unit, to join desks together, for £29.95. All prices are exclusive of VAT. The company provides a delivery service to destinations throughout the UK, for £7.50 per unit . Every item is shown in a full colour photograph. The catalogue can be obtained from SBS Computer Supplies, Victoria House, Vale Road, Portslade, Brighton, East Sussex, BN41 1GG and their telephone number is (0273) 423523.

The new 'Amstrad' catalogue offers PCW friendly office furniture of all descriptions

THE MEANING OF IT

For technophobes everywhere, here is one way of beating the boffins at their own game. The National Computer Centre have just released "The Dictionary of Information Technology and Computer Science". Despite the rather wordy title, it aims to cover some thorny terminology in a way that the layman can understand. Compiled by Tony Gunton, the entries range from optical discs to office equipment - and just about everything in between. So, if you want to keep up with the terms, contact the NCC on (061) 228 6333. The dictionary costs £25.00

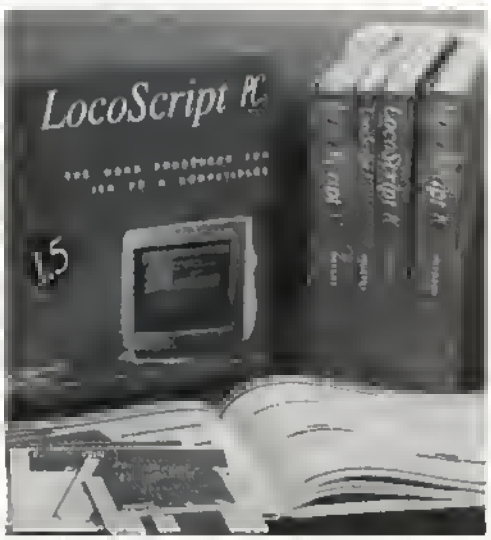
LOCOSCRIPT PC REVAMPED

Barely seven months old, and the latest brainchild of Locomotive software has been undergoing some radical changes. A new-look version of LocoScript PC was recently announced, with a few surprises in store for the traditional LocoScript user.

The most noticeable difference is the split-screen editing. This allows two documents on-screen at any one time, and the user can jump from one to the other, or even transfer text between the two.

Other improvements include a departure from the usual LocoScript scrolling technique. A new page can be displayed without scrolling through every single page on the way. This should speed up operation considerably, as will the new ability to search for a file.

The search facility is more useful than it sounds, since many PC users, likely to be hard disc owners as well, could have literally hundreds of files to access. Other features of particular interest to PC people are improved laser support, window support, and some special additions for those who use LocoScript PC on their laptops.



LocoScript PC owners can now upgrade to the latest, improved version of the user friendly word processor

A phonetic spellchecker comes as part of the program and an additional foreign language dictionary in French, Spanish, German or Italian can be purchased for an extra £49.95 plus VAT.

A complete LocoScript PC program costs £125 plus VAT. For those who brought the original Locoscript PC (after the 12th November 1990) an upgrade costs £15. All other registered users must pay £35 for the upgrade.

If you have a pristine, unopened copy of LocoScript PC Version 1 in front of you then you can actually trade it in, free of charge, for the new version. This only applies to those who bought the program from dealers Centresoft, Frontline or Gem.

Free upgrades are also available with any of the European dictionaries. By the way, don't wait too long to cash in on the upgrade offers. They are only valid for six months. Locomotive Software can be contacted at Dorking, Surrey, RH4 1YL, telephone (0306) 740606

Going public

Two public-spirited PCW owners are lending a helping hand to both fellow users and a well-known charity. Bob Ellis and David Axford are offering to copy Public Domain software on to a disc at the very reasonable charge of £1. They also distribute 'Charity-Ware' programs, a collection of software offered for sale to generate funds for the M.E. Association. Copies of this collection will cost £2 per disc, and all proceeds go to the charity.

The venture is to be called PCWfile and further information on the software available can be obtained by telephoning (0432) 761860.

The winning team

Clothes maketh the man, so they say, and in this case of this month's cover, 'Running Free' of 45, Walcot Street, Bath maketh the clothes. Many thanks to Running Free for providing the sporty attire. The shop can be contacted on (0225) 469622.

LOVE ME, LOVE MY PCW!

Brian Williams loved his PCW so much, he couldn't bear to be without it at any time. So, he knocked up this handy little PCW carrying kit, and now his roving machine sets off every day for the office in a sporty MG. This must be the only PCW with a built-in chaffeur!

Never be without your PCW with this handy carrying case!

ANYONE FOR CRICKET?

Nice to know that when the cricket season rolls round again, the PCW can take some of the hard work out of scoring.

Scorecard, by Sticky Dog Software, is a new program that knows all about totals, run rates and the complicated rules and regulations of the cricket world.

A spokesman for Sticky Dog Software said, "Scorecard is intended as a serious tool for scorers". Designed to replace the traditional cricket score card, the program will even provide in-depth ball-by-ball analysis of a match - and of individual player performance - as it is being played.

Novices - both to cricket and to the PCW - will be bowled over by the new program. It allows you to keep the score without knowing the first thing about the game, even providing a mini-map of the pitch so the scorer can simply enter the position of the hit. Scorecard is run by a system of user-friendly menus and prompts, and results can be inserted into LocoScript for incorporation into club reports, for example.

The program will be making its debut at the beginning of the new cricket season in April, and is sure to score a six with sports fans. It can even be utilised for games of 'alphabet cricket' when the season is over. Scorecard is available for all PCWs at a cost of £14.95 from Sticky Dog Software, 46 Avondale Road, Bath BA1 3EG. A more advanced version, that can produce scoring charts for any member of the batting side, costs £19.95. 8000 Plus will be giving Scorecard a fair innings in the April issue.

Starry eyed

If you were star-struck by our February review of astronomy program Startrack+, then you will be even more impressed to learn that the program as not as expensive as we originally reported. It costs £19.95, and not £22.95 as published. Startrack+ is available from Discovery Software at 291 Cricklewood Lane, London NW2 2JL

From day to data

A LocoFile diary, complete with space for appointments, information about the moon and even lunar gardening is available courtesy of Michael Soth, 3 New Road, Glympton, Oxford, OX7 1AN. Send a blank disc, stating machine type, with an SAE to the kind donor and he will send it back complete with file.

NEWS

HELPING THE CHILDREN

In the January edition of 8000 Plus we reported that the M25 User Group were looking forward to a visit from Merrick Allsop of Cornix Software. There were several new faces for the evening, apparently attracted by the mention in 8000 Plus. Due to the generosity of Cornix, a remarkable £335 was raised for the Great Ormond Street Children's Hospital. Well done to all involved. A full list of future events awaits those who get in touch with the group - contact details on page 43 of this magazine.

Other clubs with exciting future programs are the Teesside and Hampshire groups. Both clubs also produce interesting Newsletters. Again, contact details can be found on page 43.

INTERNATIONAL HAPPENINGS

Prize of the month for long distance contacts must go to the Hereford Computer Club. They have had a membership enquiry from a Professor Dragoslav Stoiljkovic of the Faculty of Technology in Yugoslavia, who asked if he could pay by American Express card. That will do nicely, we're sure. The above mentioned Teesside group come a close second, with an enquiry from Malta.

There is one club that recruits Australians regularly - but then the Amstrad PCW Australia Group is based in the Antipodes, so it doesn't count. They tell us, to our great disappointment, that the A$24 membership fee doesn't cover travelling expenses to the meetings! Details, by the way, of this and other Antipodean clubs are in the December 1990 edition of 8000 Plus.

PRAYERS ANSWERED

New clubs continue to emerge. Prompted, it would appear, by an appeal in October's 8000 Plus, Aberdare in South Wales now boasts a group. Always on the look out for new members, they can be contacted through Roy Underwood at Birchacre, Cross Bychan, Llwydcoed, Aberdare, Mid Glamorgan CF44 0EJ (0685 874972). Meetings take place at the same address on the first Friday of each month.

Mr S Kilcoin lives in Basildon, Essex, and is trying to round up PCW users interested in forming a club in his area, which he specifies as Basildon/Southend/Chelmsford. Contact him at 187, Spurriers, Laindon, Basildon SS15 5NG.

Hampstead users could also have their own club soon - Edwin Lambert, who lives at 13A Crossfield Rd, London NW3 4NS is interested in forming one. If you are interested, please write to him with a 9x4 SAE.

And then come a couple of offers from Leeds. We think that Dennis Major and Simon Mitchell should start talking to each other, and other users in the area. Dennis is at 22 Carrfield Drive, Barwick-in-Elmet, Leeds LS15 4JA, and Simon is available on 0532 493843 after 6pm.

PRAYERS MADE

We have also received requests for information about groups in various parts of the country. Christopher Neaum wants to talk to people in the Derby area who have an interest in the machine. 14 Wayfaring Rd, Oakwood, Derby DE2 2TA is the address. Adrian Murray lives in the Wirral, and wonders if there is a club up there. Not that we know of, Adrian. Not yet, anyway...

And what about PCWers on the East Coast of Scotland? Mr Hamilton knows about Scotwest PCW, but during the winter getting there can be a long trek, he says. Perhaps other users on the East Coast have club ambitions? If so, "Ardlarich", 2, Kirklands Park, Cupar, Fife KY15 4EP is Mr Hamilton's address.

Finally for this month, a request from Mrs P McKenzie in East Sussex. She is finding it very difficult to find out about clubs in the area. Can anybody help?
If you would like to start or locate a PCW user club, let us know; the address, as usual, is Club News, 8000 Plus, 30 Monmouth Street, Bath, Avon BA1 2BW.

JANUARY WINNERS!

The following winners of our January competition will shortly be receiving a copy of the totally addictive game Terracom - and will probably never do another stroke of work on the PCW again.

So, stand by for hours of pleasure, A M Phillips from Rochdale, Marian Hodges from Ashstead, N Allen from Derby, and G Markle from Dundee. The 10 words in our space-based word square are as follows: Holst, Constellation, Gagarin, Cosmonaut, Galaxy, Armstrong, Saturn, Shuttle, Venus, Satellite. The word 'sun' also qualified. Congratulations!

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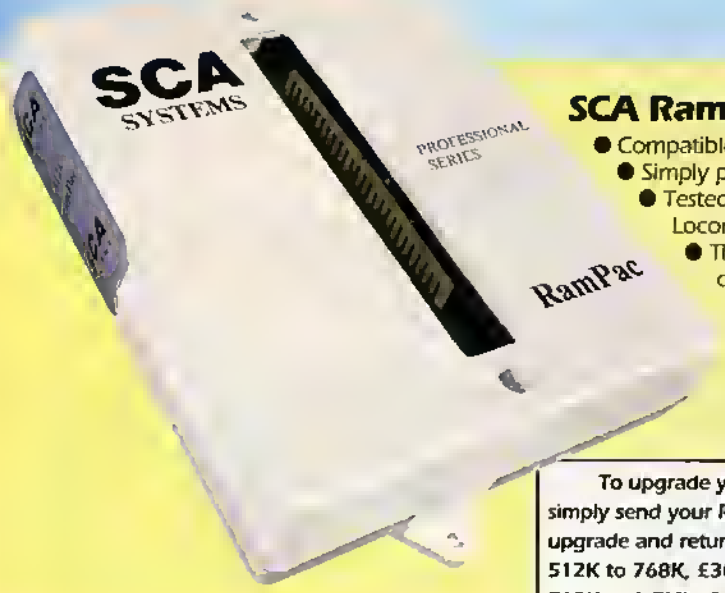

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If you use Locoscript you should have a Rampac– but don't just take our word for it, see what the magazines say–

> The Rampac will enhance any PCW and I have no hesitation in endorsing its usefulness.
> *Amstrad PCW July 1990*

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> *8000 Plus February 1990*

> You can be sure that the Rampac will work with all your Locoscript 2 programs.
> *Locomotive Software*

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Express Delivery

How can your PCW speed through a spell check, dash around a document and perform all of its usual tasks in top gear? Karen Donaghay samples a taste of life in the fast lane with the new Cirtech Sprinter

In bygone days, when the PCW was just a twinkle in Alan Sugar's eye, the cult of speed was already well established in the hearts and minds of the great British public. The fastest sportsman, the fastest cars, even the fastest animals: the quest for greater speed is nothing new. Fastest is, and always will be, best.

Then came the computer. Suddenly speed was more than just an idle pastime. At last the speed fanatics could claim a degree of usefulness for their obsession. The computer is the mainstay of many a livelihood and the faster it operates, the quicker the work gets done. More importantly this involves no early morning runs in frosty fields, or huge amounts of cash for the latest model of sports car. The only disadvantage is that generally one has to buy a new model of computer just to gain the extra speed. This is no problem for the wealthy – and disloyal – computer owner, but for most loyal PCW owners it presents something of a dilemma. Having found a machine that suits them well, most have very little inclination to change brands.

Now, at long last, they too can join the race. For the first time ever, your PCW can have extra speed, without breaking the budget. The product is aptly named Sprinter and, theoretically, can make your PCW work twice as fast. All you need is a well protected cardboard box (preferably the one that your PCW came in), and your machine can be whisked away, to return in three days' time, with its newly acquired nimbleness.

And the party responsible for such a feat? It is none other than those enterprising folk at Cirtech. Not content

The Price Tag

Sprinter	£ 89.70
Sprinter + 256K RAM	£124.20
Sprinter + 512K RAM	£158.70
Sprinter + 768K RAM	£193.20
Sprinter + 1MEG RAM	£227.70

These prices all include VAT. They also include free installation and delivery. However, to have your PCW picked up from your door, by Cirtech's carriers costs an extra £5.75, and insuring it for the journey costs a further £5.75.

Highland fling

Cirtech are based in bonny Scotland, and the address to write to if you are interested in Sprinter is Cirtech Limited, Monkshurd Stables, Newtown St.Boswells, Melrose, Scotland, TD6 0RU.

Memory lane

Sprinter can be ordered with extra memory as an additional feature. There are other products which are specifically designed to boost PCW memory - notably the SCA Rampac. It costs £113.85 +VAT for 512K of RAM compared to Cirtech's price of £158.70 for a Sprinter and an extra 512K of RAM.

with the Diamond hard disc, which broke new ground for the PCW, they have now succeeded in reaching the parts that, so far, no other product has managed to reach.

When developing Sprinter, Cirtech made a journey to the very centre of the PCW... and then, when they got there, replaced it. Curiouser and curiouser. The bottom line of this little tale is that the Z80 processor, the very heart and soul of the PCW, is taken out and replaced with – yes, you've guessed it – a quicker version of the same thing. This is technical audacity of the highest order – a simple idea, yet one which makes a radical difference to the workings of your PCW.

But, before you reach for your cheque book, there are still a few questions to be asked. Does this extra speed really help the PCW user? Well, that all depends on who the user is.

Keeping up with the Joneses

Let's say Mr Smith uses LocoScript to tap out the odd letter. Most of his time is spent typing but this raises an important point. However speedy his fingers become, he will never outdo the PCW's response, a truism with or without Sprinter. Also, his documents are reasonably small, so the time spent waiting for LocoScript to scroll goes almost unheeded. Put Sprinter into his PCW, and Mr Smith might not even notice the difference.

On the other hand, Mr Jones prepares long complicated documents in LocoScript then spell checks them before loading them into a Micro Design page. Since he is using his PCW to the full, in tasks which involve a good deal of computer power, he is a prime candidate to benefit from Sprinter.

And there lies the crux of the matter. The benefits of Sprinter are most apparent when the PCW chews over a particularly time-consuming problem. LocoSpell is a classic example. It forces the PCW to look up hundreds of words in a dictionary. Such a task takes a good deal of computation. Other good examples are filling in shapes in Micro Design, or scrolling through a LocoScript document. Anything that involves a period of waiting will obstruct the course of working quickly and efficiently. Sprinter excels in situations such as these, producing amazingly quick results.

Sprinter is rather less impressive when performing run-of-the-mill tasks, such as editing a document. The overall effect is rather one of increased responsiveness. To use a motoring cliche, your PCW will feel nippier. Like "around-town" driving versus motorway driving, the extra power in a fast car becomes most apparent in the extreme conditions of the motorway.

And what about you?

So, a sensible decision regarding Sprinter would be one based on factors such as what software you are using. There is however something else to take into consideration – and that other factor is you. What sort of person are you? Do you have the patience of a saint, or are your stress levels soaring through ➤

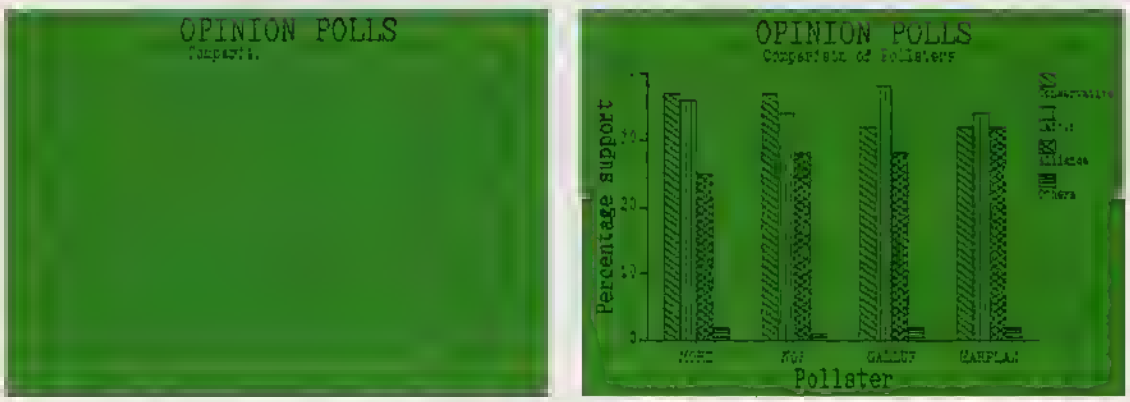
The Creative touch

Can Sprinter and ProSCAN, the revolutionary PCW hand scanner, work hand in hand? At the time of writing, the answer is yes. However, ProSCAN's creators, Creative Technology, will be performing exhaustive tests. These will allow them to decide whether they need to change their program in any way to utilise the extra speed provided by Sprinter.

Relatively speaking...

As you will see from the time trials opposite, some of the speeds clocked up exceeded one minute. So, each stopwatch face represents two minutes, and the time values are scaled appropriately to suit.

On your marks, get set...Go!



After 54 seconds, the ordinary PCW on the left has only just begun to draw the graph (from a Cracker spreadsheet). On the right, after the same amount of time, the PCW with Sprinter installed has completed the picture. A fairly impressive piece of Sprinting, we thought

Those little green lines that run down the PCW's screen when you are booting up are an integral part of daily life. Each time you load up CP/M or LocoScript – there they are. It is hard to imagine them any other way – and with Sprinter installed, the effect of them zooming down the screen is almost disconcerting.

Once you are running your software, the overall effect of using a faster machine is more difficult to quantify. It could be described as a luxurious sensation. It gives a feeling of efficiency and is certainty more fun to use. But these are all rather woolly descriptions.

The most precise way to describe the change is to measure it. So, with stopwatch at the ready, and fingers poised above keyboards, we set up a Sprinter-clad PCW against an identical, ordinary PCW 8256, and put them to the test.

The challenge	Ordinary PCW	Sprinter PCW
Booting up LocoScript	36 sec	29 sec
Scrolling through a 15K LocoScript document from beginning to end	30 sec	19 sec
Find and replace in a 15K document with one occurence of the word on each line	1 min 35 sec	53 sec
Filling in shape in Micro Design	5.81 sec	3.37 sec
Drawing a graph in Cracker II	1min 37 sec	54 sec

Inside Information

Understandably, many people feel a trifle squeamish about delving into the innards of their PCW. To sooth such qualms, Cirtech offer an installation service for Sprinter. But, for those who are equally perturbed by the prospect of spending a few days without their PCW (and who can blame them?), Cirtech intend to produce a fully illustrated manual on how to 'do it yourself.'

If the words "light-duty electric soldering iron", sound like a foreign language, then maybe you should leave it to the experts. If, however, you have a smattering of know-how, and want to go ahead, the process involves the following steps.

Firstly, you take off the back cover of your PCW, and locate the main CPU (Central Processing Unit) card and the Z80 using the manual's illustration. You can then remove the Z80 from its socket and carefully align the Sprinter card over the empty Z80 socket and push the pins into the socket. There are two wires connected to Sprinter which are soldered to the CPU card in a location also shown in the manual. Then put the casing back on, and that's it.

If your originaf Z80 is soldered to the CPU card , then this means a couple of extra steps, but the general idea is the same. All of the wires which you need are contained within the Sprinter package, but you will need some tools to hand. The most major piece of equipment required is a light-duty electric soldering iron – and no, the one you use to weld bits back on to your car won't do. You will also need a very long Phillips screw driver to take the back off your PCW, a small flat bladed screwdriver and, possibly, a small wire cutter and pair of pliers. Phew!

Even if you install the external model of Sprinter, you will still need to take the back off your PCW, albeit fleetingly. A one-wire connection is made inside and then Sprinter can be slotted on to the expansion socket.

Whys and wherefores

Sprinter works, as you know, by replacing the Z80 processor. In the case of the external version of Sprinter the original Z80 is ignored, and in the case of the internal Sprinter it is replaced altogether. The new Z80 speeds along at a very nippy 8 million cycles per second. Put simply, the internal PCW clock is what allows the processor to synchronise the flow of information.

The problem arises when the Central Processing unit (the part of the PCW which performs calculations) is too fast for the memory. This results in the aptly named 'Wait State', when the CPU needs information from memory that is not yet available. Too many wait states could defeat the whole object of having a faster processor, so to overcome this, Sprinter has its own, very fast memory bank, called Cache Memory.

However, the time it takes to complete a task relies on other factors as well as the internal clock speed. Just because the Z80 is working at twice the usual pace, it is not necessarily equivalent to the PCW you know so well, working consistently twice as fast.

To find out how this new speed translates into practical terms, we tried out the 'Sprinterised' PCW in a variety of situations, as shown on the previous page. Each test was carried out with a non-Sprinterised PCW as the control in the experiment.

In the bag

If you brave the process of installation, beware! Don't let the Sprinter out of the bag until you are ready to go. It is specially sealed in an anti-static environment to protect the delicate chips from the harmful effects of dust and grime.

the roof? Are you constantly in a race against time or is the clock simply unimportant to you?

The amount of time you save by using a faster machine is not necessarily the most important thing. That may sound strange, but if you save nineteen seconds when you scroll through a 15K LocoScript document, you need to do a good deal of scrolling before you save a whole hour.

The most annoying thing about slowness is not the loss of time, but rather the enforced thumb-twiddling that is a result. Those insignificant seconds can be easily be distorted out of all proportion, becoming increasingly frustrating the busier you are. If this is the sort of thing that bothers you, then Sprinter will transform your working practices, greatly improving your efficiency.

On the bench

The next question, in the quest for a faster PCW is how do you get Sprinter going. There are two version of Sprinter: one is a boxed version, that clips on to the expansion socket at the back of the PCW, and the other is fitted internally. Cirtech claim that the installation, in both cases, is fairly straightforward. However, they then go on to say that, unless you feel fairly confident with a welding kit, don't even bother to try.

Cirtech themselves provide an installation service and, since this is free, it is not to be sniffed at. Cirtech will install Sprinter and return it to you within four days – at no charge whatsoever. If you don't feel like boxing up your machine and sending it off yourself, Cirtech will collect it for a mere £5.75. This price includes £100 insurance cover, to cater for any knocks or damage which happen along the way. Complete cover is available for a further £5.75. Once Sprinter is safely installed, and back in its new environment, it is covered by a year's guarantee.

But what about your existing software and hardware: will it be able to co-exist with Sprinter? Well, your programs should present no problems. Sprinter is designed to work with all PCW software, without exception. Hardware add-ons are also catered for, with only two exceptions: an Eisenstein board will not work alongside Sprinter and neither will an SCA Rampac. Don't despair. If you do need extra RAM then up to 1024K is available as part of the Sprinter package. Even if you already have an SCA Rampac, the situation is not beyond salvation. Cirtech can remove the extra RAM from the Rampac, and install it alongside Sprinter. Oddly enough, although this is yet another free service, the offer only stands if you are buying one of the pricier versions of Sprinter, with extra memory included.

The end result is that you could wind up extending your memory twice - once with Rampac and once with the Sprinter add-on.

Although Cirtech are quite happy to perform this service for SCA Rampac users, there seems to be little hope for the Eisenstein hoards. This is, therefore, the only definite limitation to the Sprinter's performance. ●

Sprinter

Pluses

- ▲ Virtually free installation
- ▲ Large improvement in speed
- ▲ Well priced
- ▲ No effect on other PCW functions
- ▲ Extra RAM Available

Minuses

- ▼ Need to send PCW away
- ▼ Cannot work with Eisenstein board

Ease of Use	5/5
Performance	5/5
Features	5/5
Documentation	4/5
8000 *PLUS* Value Verdict	19/20

Summary

Sprinter is certainly a major breakthrough for the PCW. Cirtech have a good reputation and they have done their homework pretty carefully. The main potential obstacle, one of installation, has already been foreseen, and met, by their extraordinary offer to install Sprinter at a very low price.

The advantages of Sprinter speak for themselves. Faster computers are the dream of many an enthusiast, but they are also a valuable asset to anyone who uses the PCW at work or at home. Try as we might, with this product we could not find an Achilles heel. At most levels the PCW performance is markedly improved. The only point to remember is that often, speed is restricted by the pure mechanics of a situation. Sprinter cannot speed up fingers. Nor can it make a printer head move faster, or indeed, the reading head of a disc drive.

The greatest achievement for Sprinter is this. Until now, anyone wishing to radically improve their machine had one of two basic choices. They could add a new disc drive (either a hard drive or an extra floppy drive) or they could increase the memory space.

Now, finally, there is a third choice. Increasing the processing speed is an important improvement, and one that will bring the PCW in line with many faster machines. Any success that Sprinter has will certainly be well-deserved – and it could be well on its way to becoming a true PCW "classic".

Typed using LocoScript
on an Amstrad PCW8256

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Topping and Tailing

This month, Martin Le Poidevin explains how you can put text at the top and bottom of every page you write – with the help of Protext's headers and footers

One of the great advantages that a word processor gives you over a typewriter is that the effect of a single command can last for literally pages – if necessary, for the whole document. Once the command is issued the computer will remember it, and you can be sure that it will automatically carry out your wishes.

One of the best examples of this is the header and footer text. Headers and footers are 'word processing-speak' for bits of text that go at the top and bottom of every page of text. They often go unremarked, but can add a touch of professional excellence to almost any document, even one that is only a page long. We use footers and headers in this magazine. The word 'Protext' at the top of this page is a 'header' – the words change for each article, but the position remains the same – and the date and page number at the bottom is a footer.

All word processors have the ability to put text at the top and bottom of the page, page after page. In LocoScript, you will remember, you have to access the special screen via the menus to set this up. Not so in Protext. Because Protext is a command driven processor, the effect is achieved without ever leaving the editing screen.

We have already seen on several occasions how to issue a command in Protext by using the > prompt, followed by an abbreviation of the command. Often we've had to add some further information to qualify the command (for instance, **>PL 22** makes the page 22 lines long).

Top of the form

For a header, though, the extra information the computer needs is not a number, but text – the text of the header itself. Thus if we wish to have "Mindboggling Feats" at the top of every page, the command we need to put (it must come on a new line at the left-hand side of the page) is **>HE Mindboggling Feats**. Notice that there must always be a space between the command and the text to be used, and that the text itself can only use one line.

Header texts can be enhanced with embedded codes, such as bold, italic and underlining. You also have the option of giving the header more room to itself, and enhancing it by that means. Unless you tell it otherwise, Protext allows two lines for headers, and two for footers. The text goes in the first line, and the second line is blank. If, however, you wish to leave two lines blank, there is a command that will allow you to do that – **>HM** (header margin) followed by a number.

If you want to leave two lines free, the number to follow the command is 3 (2 blank lines plus the text); if you want no blank lines, then the command number is 1. All these extra lines will naturally affect the amount of space available for your text. They will not affect the page length (set by the **>PL** command, and modified by the top and bottom margins that we dealt with last month), but they will affect the number of lines you have for your freely written text. There is no need for you to worry about this, though. The computer will happily adapt all its page breaks to accommodate the extra lines.

All this applies to footers as well as to headers. The commands in this case are **>FO** (to define and turn on the footer) and **>FM** to set the footer margin. If you are calculating page lengths don't forget to account for both the header and footer sizes.

Paging Doctor Protext

The classic application for either footers or headers is in page numbering. With Protext you can easily set up your computer to number consecutive pages, and to print those numbers on the page. There is no special command which produces the actual page numbers. All you have to do is include a **%** in the footer or header.

How the page number is presented is up to you. You can leave it on its own at the bottom (or top) of the page, or you can embed it in text in order to highlight it. **– % –**, **page: %** or "This is page number % of my most magnificent document" are all possible texts. And don't worry that to you and me it just looks like a percentage sign. Protext knows what you mean, and will convert the signs to page numbers at the printing stage. A quick glance at the display at the top of your screen should assure you that Protext knows exactly where its pages begin and end.

That, then, is the plain theory of headers and footers. In practice, though, there are many further niceties that can be employed. The best way of examining these is in the context of a document, in which we can not only see the commands in action, but also the reason for issuing them.

Our document is a member of a species that can never be presented well enough – the manual. There are four (short) pages, which are going to bound in facing pages, as in a book – ie, page 1 will be a left hand page, page 2 a right hand page, and so on.

First we have to tell Protext about the page size, which will be 20 lines long, and 55 characters wide. We inform it of this with two commands we used last month – the ruler command **> R** and the page length command **>PL**. We want to make sure now that our header – which is going to be the name of our product – is going to be given sufficient space at the top of each page – so we issue the header margin command **>HM 3**.

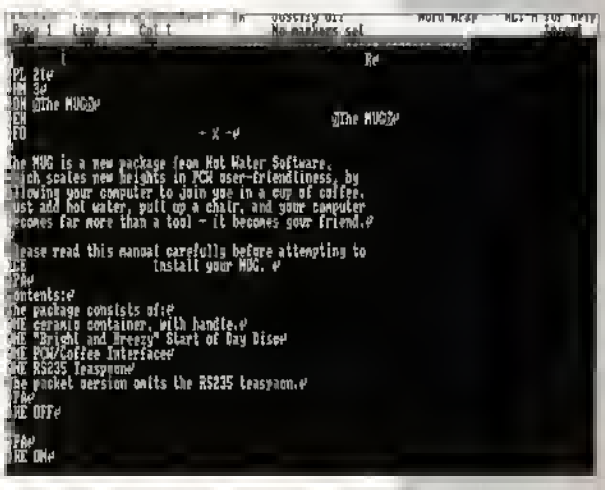
Now the clever bit starts. Headers and footers in books rarely come in the middle of the page. More often than not they are offset to the edge of the page – which edge depends on which side of the book the page is. For instance, if you have a header on the outside edge (ie the top left hand corner) of the left hand page, you will almost certainly want to balance it with one on the outside edge (ie the top right hand corner) of the right hand side page. Again 8000 Plus ➤

How much?

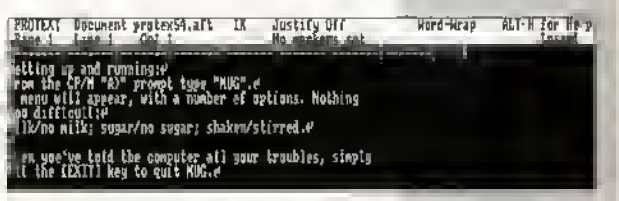
Protext is available from Arnor, priced at £59.95. Arnor are at 611 Lincoln Road, Peterborough PE1 3HA, telephone 0733 68909.

Hints & Tips

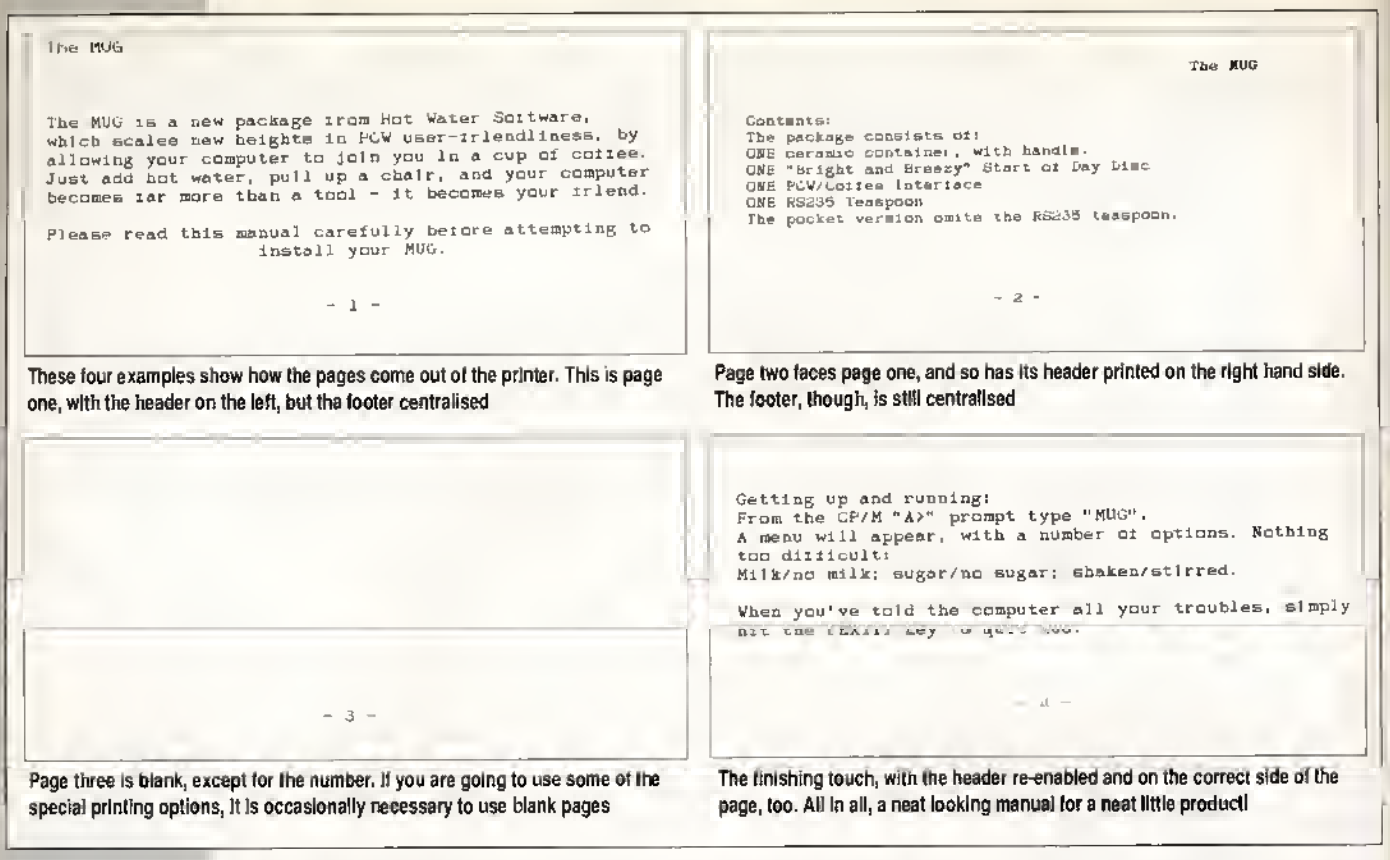
To get your header or footer centred on the page you can try the following ploy – first issue the command ">CE" followed by the text. Now erase the "CE" and replace it with "HE" or "FO". Your header text should remain centred.



The first part of the document as it appears on screen. Notice that both page two and three finish with the >PA command line



Page four of the manual. There are no command lines here - everything is remembered by Protext from the top of the document



These four examples show how the pages come out of the printer. This is page one, with the header on the left, but the footer centralised

Page two faces page one, and so has its header printed on the right hand side. The footer, though, is still centralised

Page three is blank, except for the number. If you are going to use some of the special printing options, it is occasionally necessary to use blank pages

The finishing touch, with the header re-enabled and on the correct side of the page, too. All in all, a neat looking manual for a neat little product!

Code comfort

Printing a document out can often seem inconvenient, if not impossible. But what if you want to check that your printed document is going to look correct when all the commands on screen are taken out? The answer is simple. You will have to leave the editing screen by pressing [STOP], and at the prompt, type 'PRINT' or 'PS' followed by [RETURN], and then follow the instructions. Your pages will scroll past you roughly as they will appear on paper (but without bold, italics and so on). To stop scrolling, press [STOP]; to start again, press the spacebar, and to stop for good, press [STOP] again.

provides an ideal example of this. Since the position of the header (ie the spaces before the actual letters) is considered as part of the text, this means that you need two headers which alternate.

Luckily, in Protext you do not have to redefine the header at the start of each page. Instead, you are allowed to define the two alternating texts at the start of the document, and the program will automatically put the correct one at the top of each page.

The process by which Protext alternates the headers is linked to the page numbering – header 1 (although we are using headers this applies equally to footers) applies to the odd pages, header 2 to to the even pages.

In our document page one (and subsequent odd-numbered pages) will be on the left; page 2 and subsequent even pages on the right. Your particular document may be different, of course. You may, for instance, have your first page on its own at the very front of the document (just like the front cover of this magazine), so that odd pages will be on the right. It is a good idea to do a quick mock-up of the finished document to check which pages are where.

Putting on the bits

For our manual we want the headers to be on the outside edge of each page, which means that for the odd pages they will be on the left. Our text is going to be simply "The MUG", with no spaces in front of it. To tell Protext that this header is to be used only on odd-numbered pages the command is **>OH**. Likewise, for even pages the command is **>EH**, followed by the text. In this case the even pages' text is "The MUG", pushed over to the right-hand side of the screen (you will have to position it using the space bar). If you want the header and the footer to appear on the first page as well, make sure it is not preceded by a carriage return. Notice that we are also using the embedded code [ALT][X][B] which will embolden the text of the header each time it appears.

When positioning text, do not forget that the command occupies four character positions at the left hand side of your screen whilst editing, but they will not be there when the document is printed. Therefore you must actually put your header/footer four columns further to the right than you actually want them to appear. The best way to make sure of the result in an important document is to do a little experimentation.

Footers follow the same rules as headers for their odd and even pages, and the commands are the ones you would logically expect – **>OF** and **>EF** respectively. For our document, though, we will only use one footer text, which will be the page number, and which we will put in the centre of the bottom line of each page. To add interest we will put a dash before and after the number. The command then becomes **>FO** with - % – placed in the centre of the line, again allowing four spaces for the command.

So now we have now set the headers and footers for the whole document. Unless otherwise ordered, Protext will merrily go on putting them at the top and bottom of the relevant pages, incrementing the page numbers as it goes.

However, there may be some pages on which you do not want the header. This might occur at the start of a chapter, or on a page devoted to graphs or illustrations. For instance, page 3 of our document is going to be a picture of the product. We want the page number, but nothing else. So we need to suppress the header. The command for this is **>HE OFF**. We issue that at the start of the third page. If it had been the footer we wanted to suppress, the command would have been **>FO OFF**.

Now we have to indicate to Protext that the page has nothing on it. We could do this by filling it with returns, but this always carries the danger of miscalculation, with the result that blank lines appear at the top of the next page. The best way of avoiding this is through the **>PA** command. Although usually referred to as the "New Page" command, it is not quite that – it does not immediately start a new page, but pads out the old page to its full length with blanks, and adds the footer before moving on.

The **>PA** command is exactly what we want here. The only danger is that if there is absolutely nothing on the page – no header, no text – Protext will decide that the page is unnecessary, and omit it altogether, so that what we had intended to be page 4 would become page 3. To avoid this, we need something on that page, even if it is only a carriage return. Put that in and the page will be printed completely blank, except for the number at the bottom. There is also a **>PA** command at the end of page 2, to keep things neat.

Having turned the header off for page 3, we now need to turn it back on again for page 4. The command is **>HE ON**; the corresponding footer command being **>FO ON**.

All you need to know now, is how to print those professional looking documents out - a task which we will be tackling in next month's tutorial. ●

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PCW8	£4.60	£4.80
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- Safer data storage
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PCW8256 - Green screen, single drive, 256k Ram. .....Please phone for new lower prices.
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PCW STARTER PACKS - ALL TOGETHER NOW!

10 x CF2 3" discs / one of which will be our free gift pack disc - see above /3" - 3.5" locking disc box + 2000 sheets listing paper (11" x9.5") 3 printer ribbons /drive cleanor & dust covers ALL FOR THE BUNDLED PRICE OF.....£59.00

State machine type when ordering & state fabric or carbon ribbons

Changing to an IBM COMPATIBLE???

Contact us re prices and specification on the following (and more!):
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"LINK YOUR PCW TO A PC!"

Like to run your accounts on a PC but use your PCW as a workstation? Send for details of Compact Accounts PC2PC!

OUR GUARANTEE

is a bit special. If any computer or printer bought from us (without on-site maintenance being offered) goes wrong under warranty we will collect repair and return at our cost.

All you have to do is telephone!

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256k upgrade takes your memory up to that of the 8512. Recommended for use with Locospell and Microdesign II. Very easy to fit - full instructions included.

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For use either on the PCW8256 or 9512 but not 8512 (external only) £69.00
File conversion software for PC.....£26.00

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THE RamPac that supercharges your PCW! Just plugs onto expansion port to provide extra area of RAM. Through connector allows continued use of other peripherals - Locomotive tested!
512k RamPac £99.00
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With Real Time Clock.....£50.00
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Diamond 48Mb PCW Hard Disc.....£539.00
THE ABOVE RANGE CAN BE SHARED BY MULTIPLE PCW'S - DETAILS AVAILABLE.
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The NEW HardPak - no bigger than an RS232 interface - fits in same way.
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WS4000PCW, complete with integral PCW interface & connecting lead!..... £147.80

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Cable to PCW Interface £13.90
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PCW8256/8512 - 3 piece grey £10.40
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Printer stand - any width - rugged ..£14.75
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Mouse Mat £4.35
'Margin Maker' - aligns paper £9.90
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	Amsoft	x10	£17.20
	Amsoft	x20	£34.10
	Amsoft	x30	£50.70
	Amsoft	x40	£67.00
	Amsoft	x50	£82.50
CF2	3" Maxell	PCW/CPC x 5	£10.00
	Maxell	x10	£16.00
	Maxell	x20	£31.60
	Maxell	x30	£47.70
	Maxell	x40	£63.60
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Maxell individually cased discs are available - please 'phone for prices

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	x10	£29.25
CARBON MULTISTRIKE	x 2	£6.50
	x10	£29.25

PCW 9512 - daisywheel printer:

CARBON MULTISTRIKE	x 2	£6.00
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FABRIC TYPE	x 2	£6.00
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	HQP40	x 2	£15.60
	HQP40 Colour	x 2	£39.00
	HQP45	x 2	£20.80
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1 sheet thick - 1000 sheets £15.75
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A4 - (True A4) 80 gsm - Continuous:-

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Plain white/micro perf x 1000.....£19.95
Plain white/micro perf x 2000.....£33.50
A4 - Single sheets - white x 500..... £8.25
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LocoMail - use with Locoscript II.... £21.00
LocoSpell - use with Locoscript II... £18.90
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LocoScript II & LocoFile £24.95
always state the type of PCW you use.

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More than a simple labeller - ideal for anything from greetings labels to consecutively numbered raffle tickets

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Cornix Card Index - easy to use £25.90
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SEE LOCOFILE IN WORDPROCESSING

NOT ONLY BUT ALSO!

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Protext, a PCW users guide	£9.95	Supercalc Training Manual	£12.95
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Please make Cheques/P.O's payable to "W.B.B.S. Ltd."

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Please note - we have moved our Sales and Despatch departments to new premises
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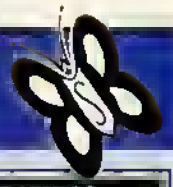

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Great value!.....£28.25
This is the very latest version from the Connect stables - a top seller.

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We use Compact for our own accounts system. The best is on the PCW!
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FULL RANGE OF STATIONERY AVAILABLE

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Intact £65.00
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Homeview: Estate Agents prog. . £169.95
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Extremely fast with GSX graphics.
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Very popular integar C compiler.
HiSoft Devpac80 .....£33.85
Version 2 - very compact.
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Contains an enhanced linker, overlay, manager and redundant code remover.
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Close to ANSI-74 COBOL
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The complete disc recovery system with selector copier and build-file option. Essential utility for PCW

MICRO SIMPLEX

MICRO SIMPLEX A/Cs & VAT MADE SIMPLE
Particularly suited to shop-keepers as will cope with Retailers VAT schemes A, B, C, D, E, F, G, H&J & Pharmacy Scheme B. Also suited to any small business used to keeping its books weekly. £99.00

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Popular Invoicing £40.00
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PSIL - Integrated Stock/Inv/Sales/ Purchase & Nominal ledgers.....£149.00
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DIGITA

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Personal Tax Planner.....£20.00

DIGITA SYSTEM 3 £29.80

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INVOICING/SALES LEDGER
CASHFLOW CONTROLLER
Not a full accounts pack but rather a suite of 3 separate 'tools'

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Complete C development system.
BCPL.....£19.90
Flexible, fast, general purpose programming language.

PLEASE NOTE: THIS ADVERT CONSTITUTES JUST A TINY PART OF OUR RANGE OF PRODUCTS (see 'Not only but also'). WE NOW HAVE A FULL COLOUR CATALOGUE - 1000's OF LINES OF OFFICE EQUIPMENT & SUPPLIES (useful in the home too!) 576 PAGES FOR JUST £5.00 (INC VAT).

PCW 9512 AUTOMATIC SHEET-FEEDER..POA

DESKTOP PUBLISHING --- DESIGN --- GRAPHICS

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RUNS ON the PCW8256/8512/9512 (the 9512 needs a dot matrix printer to print). 'The manual is comprehensive, immensely friendly, and will lead you where you want to go' (New Computer Express) - and its 150 pages long. IMPORT FILES from Locoscript 2, Protext, Wordstar, Masterscan, Stop Press and other PCW software.
** TEXT EDITING : TYPESETTING : FONT DESIGN : GRAPHICS : DIAGRAMS : LOGOS **
'The Rolls Royce of PCW desktop publishing.' (Amstrad PCW Magazine).

NEW FROM THE PRODUCERS OF MICRODESIGN II - PROSCAN - A HAND SCANNER FOR THE PCW!

ProScan - from CREATIVE TECHNOLOGY. A brilliant new triumph from the makers of Micro Design II. 'Excellent quality, Easy to use, Cheap.' 8000 Plus Magazines verdict - scoring 20 out of a possible 20!!! First CREATIVE TECHNOLOGY brought you the software & now the hardware to turn the PCW into a serious dtp machine.
THIS NEW SCANNER IS SO GOOD THAT YOU MUST SEND FOR DETAILS!.....£155.60

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Logitech/AMX type Mouse + Intfce ..£41.30
Stop Press - Software only.....£28.50
Kempston Mouse + Interface £52.00
Desktop Publisher & Mouse £51.99
Master Scan £48.50
Master Pack (scan and paint).....£54.60
Master Scan not for professional use.

PCW DRAW - at last a professional drafting program for the PCW £33.00

WE SUPPLY EXACTLY WHAT YOU ORDER
PLEASE MAKE SURE THAT WHAT YOU ARE ORDERING IS WHAT YOU WANT!!!
SORRY BUT WE DO NOT SELL ON APPROVAL

EDUCATIONAL AND FUN!

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Loco Surgery

Having problems with LocoScript? Can't find the answer in the manual? Liz Bruce provides some expert advice on your LocoScript queries

Q *I'm having problems with a Panasonic KX-P1124 printer. After printing one page, I cannot load a new sheet and just press [EXIT], as before. I now have to press the on-line button on the printer followed by [PTR], [f1], [ENTER] then [EXIT] to re-start printing. This is infuriating and, I wonder, am I doing something wrong in the first place or is this simply the price we have to pay for the improvement in print quality?*

Panasonic tell me that if I have set up LocoScript correctly with the printer drivers disc, which I have , then I should be able to operate the machine as I would the original Amstrad printer.The manual is complicated and it is difficult to make out the instructions clearly.

I would also like to know how the combination of controls (down the left hand side of the machine and across the top) can be interchanged to 'create more than 5,500 different print styles', as well as double height and double width.

I would be very grateful if you could let me know exactly what I'm doing wrong.

GM, Washington.

A I don't think this is a problem with the printer, I think this is a LocoScript problem, so it's not surprising that Panasonic can't help.

Locomotive are highly committed to supporting a huge range of printers, and do their best to make the relevant information available. You should have, in your Locoscript 2 package, a book called 'PCW External Printers Guide'. If you don't, this is what you need to obtain.

One of the problem-solving points raised in the book, is the situation where the printer prints one page and then, although you have put more paper in it, does not print anymore. When you press **[PTR]** you get the message **Waiting for Paper**.

It's not clear if this is exactly what's happening to you but if it is, all you have to do is press **[PTR]** then the [+] settings key, so try that. You don't need to press **[EXIT]** after this - it works automatically.

This option clears the **Waiting for paper** message, and puts the printer back on-line, in one go.

It only works on later versions of LocoScript 2. Check your version number on the titles screen when you load your Start of Day disc. It should read v2.28 or later.

The booklet also explains about the different types of printer including 24-pin printers. If you are running the printer in 'download' mode it takes its commands from the computer, not its internal bank of supplied print-styles. So, using download, you can print all the characters in LocoScript but you cannot make use of the built-in print styles at the same time.

You could experiment without the printer in download mode but remember, although you may then be able to access the many print-styles, you will not be able to support much more than 0-9, A-Z and basic punctuation: none of the more exotic LocoScript characters will print.

You may also have problems with certain characters (such as # appearing as $) although sometimes it is possible to load extra character sets from your printer driver disc, to support some of the available type styles your printer can produce.

If my suggestion does not work, your local Locomotive Dealer should be able to help or, if not, Locomotive themselves. It is certainly my experience, although I have not installed that particular printer, that external printers, once properly installed, rarely cause problems.

If you do have more trouble, and while you're waiting for answers to your anguished letters, why don't you buy some continuous-feed A4 paper? You can use it on the tractor feed, setting up your documents for continuous paper. Alternatively, get a sheet feeder and set up for that.

Why don't you anyway? It always seems a little silly to me to use a word processor then hang over the printer feeding it every sheet.

Q *I have recently run into some difficulties when printing with Penman font on my PCW 8512. You can see that with 12 cpi, the Penman characters are correctly formed, but somewhat disjointed. When I change to 15 cpi, as recommended, you can see what happens. What am I doing wrong? As far as I know, I am doing exactly the same as before, when it seemed to work.*

I was working with a Start of Day disc that held PM and three other fonts. These other fonts do not seem to be affected. I deleted the PM file from the working disc and copied it again from the master disc. There was no change.

I presume my working copy of Locoscript 2 is all right since everything else seems to work perfectly. Can you please help me out?

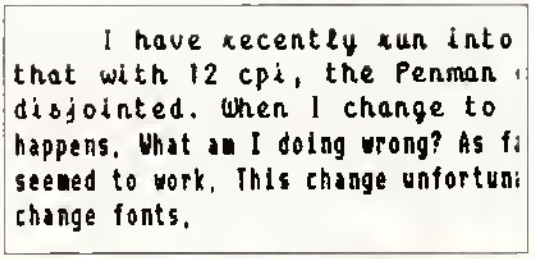
By the way, I did gather that it was not possible to change fonts during printing. Have I proved that wrong or is some other matter afoot?

CP, Glasgow

A This is a new one on me! As it worked OK to start with, I can only assume that something has happened to your Start of Day disc, though not necessarily to the actual PM font. I know you have re-copied the relevant file, but I suggest you go right back to the beginning and make a new installed version of LocoScript and your fonts.

You will need your original LocoScript 2 disc and you need to run the installation program (which is found on side two of the master disc) following the instructions provided on-screen.

I hope that this will solve your particularly unusual problem. If it doesn't, does anybody else out there have any bright ideas?



The difference in Penman's style at 15 cpi is clearly noticeable

Question time

If you would like to consult our Loco agony aunt Liz Bruce, simply put pen to paper and write to LocoScript Surgery, 8000 Plus, 30 Monmouth Street, Bath, BA1 2BW.

Little and large

Typographers everywhere refer to characters per inch as cpi, but mention the Penman font and you might leave them scratching their heads in bewilderment. That's because Penman is a special LocoScript font, designed to look like handwritten script.

Q *Can you answer a question that has been troubling me for some time?*

I don't understand how you can have LocoScript 2 at 10 pitch, A4 paper at 8.5"across, a left margin set at 10 and a right margin is set at 83. Why isn't the right margin set at 73? The above prints with 1"margins.This is the set-up for the 8000 series, but for the 9512 machine the margin has indeed been changed. Characters might change but, unless I am gravely mistaken, inches don't.
B.M, Catterick.

A You're absolutely right, but in fact you have answered your own question. Inches don't change, characters do.

Your confusion is over pitch and scale pitch. The PCW 9512 comes set up for 10 pitch, in other words, to print 10 characters per inch. The margins are set for this at the values you describe and are correct.

The 8000 machines come with a default of 12 pitch, or 12 characters per inch and this is the scale pitch in which the margins are set.

What you have presumably done is to change the pitch in the document to 10 but you have not altered the layout to scale pitch 10. This means the margins are still set in pitch 12.

LocoScript, however, holds on to the margin settings, even though the pitch you are actually typing in has been changed. Have you never noticed that the lines of text on the screen don't actually reach the right hand margin? Or, if you are using justification, look very spaced out?

This happens because the machine does its best to show you what will actually be printed out. The limitations of the monitor mean that it cannot show you different sizes of characters so instead LocoScript shows you where the ends of the lines will be when printed out on-screen. This may or may not appear to be at the margin, depending on whether the pitch you are typing in is the same as the scale pitch.

To investigate scale pitch, you need to be at a layout screen, either by going through **[f1] Document Setup** then **[f2] Change layout** or **Change stock layout**, or by going into **New layout** or **Change layout** from [f2] on the editing text screen.

All of these will then give you a summary of the layout in the middle line of the three status lines at the top of the screen and, at the very right, you are told what the scale pitch is. (See screendumps 1 and 2 opposite.)

If you try this from one of your 8000 documents, you will find that the scale pitch is 12, not 10.

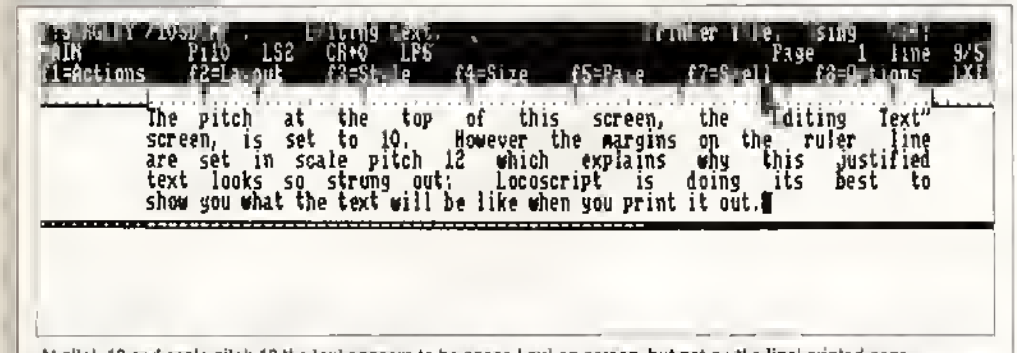
Remember, the ruler line at the top of each screen or where you have changed the layout is measuring in characters, not inches and you only know how it relates to inches by knowing the scale pitch.

The scale pitch should be the same as the predominant pitch you are using in the document which means the text lines will wrap at the right hand margin. However, some people prefer to work in scale pitch 10 (10 characters to the inch) as it makes it simpler to set margins and tabs.

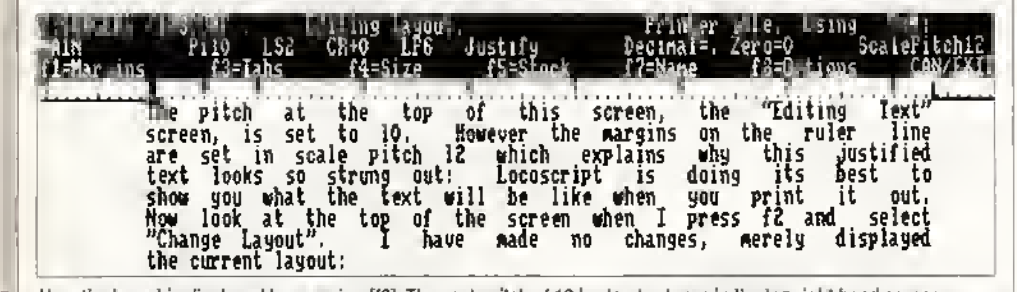
These people accept that if their main pitch in the document is 12, for instance, then the lines of text on the screen will extend past the margin line. This really bothers other people though, who prefer to stick to the suggestion of keeping scale pitch the same as their main pitch.

LocoScript uses the idea of scale pitch to allow you to fix margins and tabs absolutely. This means that however many times you change pitch in a document (for headings or notes, for instance) and however odd the result looks on-screen, when you print it out the margins and tabs will be in straight lines.

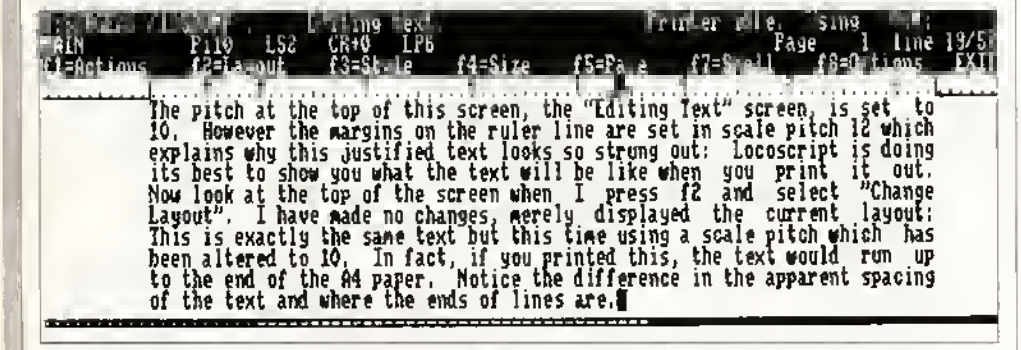
The three screendumps opposite show the situation as you describe it and should make all this clear.



At pitch 10 and scale pitch 12 the text appears to be spaced out on screen, but not on the final printed page



Here the layout is displayed by pressing [f2]. The scale pitch of 12 is clearly shown in the top right hand corner



Once the scale pitch is also set to 10 the text on screen looks very similar to the product on the printed page

Q *Please could you explain in simple terms just how I can complete the installation of LocoSpell on my 8256. I've followed the supplied installation instructions faithfully and apparently successfully, without joy.*

I now have a Start of Day disc which proclaims on its title page LocoScript v 2.28a and LocoSpell v 2.28a. The main screen shows MATRIX #SS and MATRIX #ST in Group 0 on Drive A and M. (Drive A also has PHRASES STD and SETTINGS STD.)

When I edit a document and press [f7]to select Spell, the menu shows "Error in Locospell, LOCOSPELL.DCT does not exist." I understand that, but not how to get the dictionary on to my Start of Day disc. The LocoSpell Master Disc only leaves 29K free in the memory , so I can't put the LocoSpell Dictionary on to Drive M to transfer it to my Start of Day disc. What obvious elemental thing do I not know? Please help me get off the nursery slopes!
AP, Crewe.

A First of all, you are far from alone. Secondly, you have a problem, although it is not insurmountable.

A brief history lesson is in order. When Amstrad came up with the idea for the PCW, they built the hardware but the software development was farmed out to Locomotive, who developed LocoScript 1 to fulfil the brief Amstrad gave them.

The original idea of the PCW was simply to replace a typewriter. On that level the PCW 8256, with LocoScript 1, was perfectly satisfactory.

However, Locomotive were not entirely happy with LocoScript 1, although it did exactly what Amstrad had asked, and off their own bat they developed LocoScript 2 and also the additional programs such as LocoSpell, LocoMail, LocoFile and the additional fonts and printer drivers.

You have to remember that these were Locomotive developments, not Amstrad's. Amstrad, meanwhile produced the 8512 and 9512 both of which had twice the memory of the original 8256. The additional programs run well on these machines, but the smaller memory of the 8256 causes problems as it was never intended to run extra programs.

By the way, this also explains why you still get LocoScript 1 even today if you buy an 8000 series machine. Amstrad had paid a licensing fee to put out the LocoScript 1 software and were not prepared to pay another fee to distribute LocoScript 2 , although they did re-license for the 9512.

The obvious solution for 8256 owners wishing to run extra programs is to upgrade the memory on their machines.The simplest way to do this is to buy one of the RAM packs which simply click onto the back of the machine, so that you don't have to open the case to fit extra memory chips.

LocoSpell causes the biggest problems, not because of the program itself, but because of the size of the dictionaries. There simply is not enough room on the Start of Day disc to store the dictionary, nor is there room on the M drive to both store and run it.

All is not lost, however. In the first place, you can increase the size of your M drive by making sure everything which is not essential is deleted from your Start of Day disc. In your case, this means PHRASES.STD. You can keep phrases in groups on your working discs, only loading them when you need them, although this will only give you 1K of extra memory.

In the second place, you can delete one of the MATRIX files. MATRIX #SS is the Sans Serif file and MATRIX #ST the standard file. Many people don't realise these exist, but they support the choice of fonts you can print with - standard or Sans Serif, in other words, with or without the little tails on the ends of letters.

If you always use one or the other you can delete the one you don't use, giving you more room. If you delete both, the printer will not work at all.

What you are trying to do is to give yourself enough room on the M drive to put the small dictionary on it. There is no way you will be able to run the large one unless you upgrade the memory. By my calculation, simply deleting one of the matrix files should do the trick for you.

If you then re-load your Start of Day disc, you will find you have more room on Drive M as well. However, once you have copied the small dictionary on to your Start of Day disc and then re-loaded, so it is also on Drive M, I'm afraid you will find yourself very short of room and likely to keep getting the dreaded **Memory Full** message. The only answer to that is to upgrade the memory.

If you do get the **Memory Full** message, don't panic. Go back to the Disc Management Screen and delete the dictionary from Drive M. This will give you plenty of room to complete your edit or save.

If you have more room on Drive M than you do on your Start of Day disc (for instance if you have upgraded the memory but have not added a second disc drive) you can still load all the necessary files, including the large dictionary, automatically.

You can do this by creating a special file in group A of your Start of Day disc. Put the cursor in group 0 then press **[C]**. Name the file **ET.AL** and press **[ENTER]**. When the new document appears, just press **[EXIT]** and save this blank document.

You can then put extra files on another disc (or side 2 of the first one) and, when you start the machine with the first disc, (your original Start of Day disc with **ET.AL** added) you will be prompted to insert the second disc during the start-up procedure.

There is another way of running LocoSpell on the 8256 that doesn't require a dictionary on your Start of Day disc, or on Drive M. When you wish to spellcheck a document you save it to disc then copy it to Drive M.

Then, you take out your working disc and put in the dictionary disc, small or large (make a copy from your LocoSpell master disc of either the small or the large dictionary, but not both). Press **[f7]** to tell the computer you have changed discs.

Now go to your document on drive M, choose the editing option, and then run the spell checker. The dictionary will run from the disc.

This is only advisable as a short-term solution, until you upgrade your memory. It is painfully slow because the dictionary is running from disc rather than memory.

I hope you find one of these solutions works for you but I'm afraid none of them will prove to be completely satisfactory for the long term. The best solution is definitely to upgrade your memory.

Scaling the heights

To swap from a scale pitch of 10 to a scale pitch of 12 is easy enough to do. Simply choose [f2] for 'layout' from the editing screen, then [f8] for 'options' and take your pick of pitch.

Q ***I am finding your pages on LocoScript very informative and good as the manual is, your instructions seem much easier to follow.***

Maybe you can also offer some advice on compiling a music catalogue, using LocoScript and LocoFile. In the LocoScript section, I have say, group 1 of the disc for composers and all files have names like BEETHOVEN.COM.

What I now need is a quick way of moving 40 or 50 files, all ending in the same three characters, from a particular group of the disc to another empty group on the same disc?

Using a program in BASIC, I could move all the files by typing in one command line. Is there a similar command in LocoScript?
JL, Lesmahagow

A Thanks for the compliment! I'm afraid the answer is no, Locomotive, if you're reading this, this question is one of the commonest we receive; how about doing something about it?

However, all is not lost. As you say, you can move files a batch at a time in BASIC and you can also do it with CP/M. CP/M doesn't care whether the files are LocoScript files or anything else and the **PIP** utility will move them for you. You need to use the **USER** command to change the group: **USER 4** for instance corresponds to group 4, then just use **PIP** in the normal way.

I do wonder why you have all these files in the first place. Could you not make better use of LocoFile instead? If these files are biographical notes on composers, then why not use LocoFile to store them as separate records? LocoFile doesn't mind what you store on a record, so you could have only one field containing all of your notes.

One other point. You may be keeping separate files because you need to use them in different ways and can't manipulate them the way you wish under LocoFile. The answer is to use LocoMail as well, which lets you print selective reports from LocoFile and also add different LocoFiles together to get one longer one. LocoFile by itself is quite a simplistic database. Although it is excellent for data storage, it's not so good at data sorting or selective handling. Using LocoFile and LocoMail together, you gain a powerful data system which might be a better overall solution.

File of Facts

Fed up with filing? Bored with your index cards? Why not let LocoFile take the strain? Karen Donaghay sets the scene with this month's introductory tutorial

Truth is often stranger than fiction, and sci-fi books about the all-seeing, all-knowing computer seem pretty outmoded these days. The financial nerve-centres of the world are all controlled by the ubiquitous chip, and every self-respecting office has its own version of the big brother at the stock exchange.

The PCW played an small part in the computer revolution. It is a huge success story, outselling and outliving many of its pricier brethren. Yet, despite its pioneering role, many PCW owners don't yet realise the full potential of their machine.

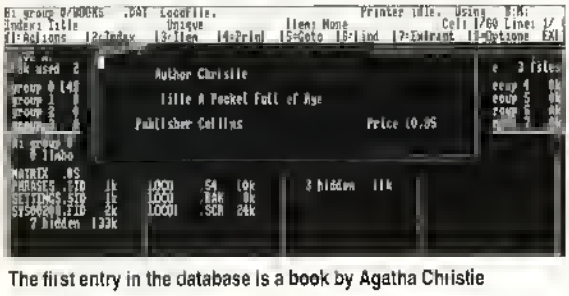
One of the most extraordinary talents of the PCW is its ability to handle large amounts of information: juggling facts with apparent ease, storing them on to the tiny disc and finding relevant details in milliseconds, and all at the push of a button.

So why is it that certain PCW owners are still searching for Mr Moffitt's address among a yellowing, dog-eared stack of index cards? Why is that the ugly, grey filing cabinet is still the hub of many an office?

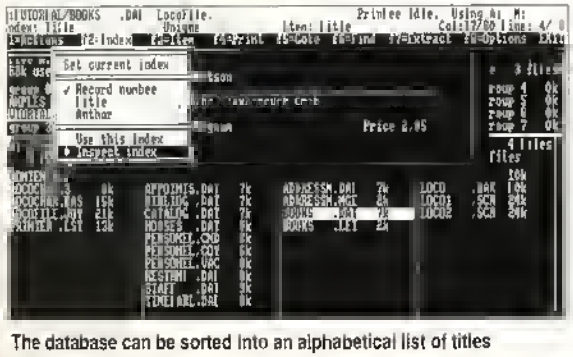
This month we will be taking the first steps towards computerising your entire filing system, your address book, your index card system or just about anything else that takes your fancy.

For fingertip information there are few better places to start than with LocoFile – it is simple, effective and on-screen it looks remarkably like a card index box. A major bonus is the complete compatibility with LocoScript 2 – so much so, that they actually merge into one program. If you can imagine a typewriter with a built-in filing cabinet – not an easy task, we admit – this should give you some idea of how closely entwined they are.

LocoFile can be run directly from the LocoScript menu by pressing [f1] and choosing to Run LocoFile from the list of options shown



The first entry in the database is a book by Agatha Christie



The database can be sorted into an alphabetical list of titles

Two Piece Suite

When you get your first copy of LocoFile, your initial task – after ripping off the wrapper – is to merge it with LocoScript 2 (LocoScript 1 users will need to upgrade to LocoScript 2).

If you are already using LocoScript 2, you need to make sure that you are using the very latest edition. Take a peek at the reverse side of the LocoFile disc. It should say something like LocoScript v 2.28. If your own LocoScript disc cites an earlier version, say v 2.21, then you need to update. Don't worry. This may sound complicated but the installation program holds you firmly by the hand all the way.

To begin with, you will need three things: the master copy of LocoScript 2, the master copy of your LocoFile disc, and a blank disc. Protect both of the master discs, by opening the 'write protect' shutters at the top of the disc.

Beginnings

If you are installing LocoScript 2 for the first time, use the Installation Program on the reverse side of your LocoScript 2 disc. Press **[SHIFT] [EXTRA] [EXIT]** to run the Installation program. You are asked to confirm a description of your PCW, stating the number of drives and the size of the memory.

When the Installation menu appears, choose **Option 5**, to install **LocoScript 2 and LocoFile** for the first time. Put the LocoScript 2 and LocoFile master discs in the drive when prompted, and follow the instructions given. Your blank disc is eventually made into a new Start of Day disc.

Those who already have LocoScript 2 follow a slightly different procedure: using the Installation program on the LocoFile master disc in the same way, choose the **Update** option from the menu, and put your LocoScript master disc in the drive.

A list of choices appear and you choose to add LocoFile by moving to that option with the cursor keys and pressing **[+]**. Finally, you are then asked to choose the type of printer you are using and all of this information is copied onto the new Start of Day disc.

The Installation manual does give more information on the process – fifty pages more to be precise. Just a touch of overkill, perhaps? Unlike most of Locomotive manuals, it is also a very confusing read.

Luckily, you can install LocoFile, as described above, without reading all of the small print. The on-screen instructions are very clear, but be sure to open the write-protect holes on both of your master discs, just in case. Then, even if a complete disaster occurs, you can always revert to the master copies and the manual, and start again.

Lift off

By now you should have in front of you a brand new start of day disc .. so, go ahead and start the day by re-booting the machine. The disc management screen will appear but, oddly enough, there is absolutely no trace of LocoFile.

Until, that is, you press the Actions key **[f1]**. There, as clear as day, appear the words **Run LocoFile**, as shown in our first screenshot. Pretty self-explanatory, we thought.

At this point, you need to have a LocoFile database to hand and, luckily, you won't have to look too far, since Locomotive have provided several examples on their original disc.

However, as you all know, the golden rule for master discs is to hide

them, in a sealed box, under the floorboards, only dragging them out in times of dire need. But, rules are there to be broken, and in this case we are merely going to bend them slightly.

So, booting from your LocoFile master copy, you will see a file called **book.dat**, listed on the A drive. This is the example file that we are going to use. Copy this file on to your M drive, by moving the cursor over **books.dat** and pressing **[f3]**.

Once inside the **File** option, check that the cursor is over **Copy File**, before pressing **[ENTER]**. Move your cursor into the M drive section, press **[ENTER]** again and it should be copied over. You can then remove your master disc and put it safely under lock and key once more. Don't forget to tell LocoScript that you have changed disc by pressing **[f7]**.

Exotic functions are just around the corner, but first you need to know how to access a typical LocoFile database. Even this much knowledge can be very useful. Everyday, millions of people sit and tap into databases, without having the faintest idea of how to set them up. Obviously, you will eventually want to do both, but this month we are simply going to explore.

Book list

Your first step into LocoFile territory is to position your cursor over **books.dat**. Again you need to choose **[f1]** followed by the option to **Run LocoFile**. Press **[ENTER]** and you should see your first LocoFile record, referring to Agatha Christie's book *A Pocket Full of Rye* (see our second screenshot).

This database might be used by a bookshop, a small library or even a publishing company, (although the chances are that they would have a more detailed version).

To see the next book, you can simply press the **[PAGE]** key. Another book will appear on the screen, and you can view consecutive books in this way until you receive the message **No more records**. (See our Jargon Busting section for a definition of a Record.)

The order of these records depends on how they are indexed. They can be indexed alphabetically (under the author, or title) or by record number. The Index option, obtained by pressing **[f2]**, will show a tick beside the index currently in use, as shown in our third screenshot.

Changing this index is easy. Move your cursor to the appropriate line, for example **Author**, and press the **[+]** key. This becomes the current index and you can check this theory by going back to the beginning.

To do this press **[f5]** for the **Goto** option, and move the highlighter bar down to **First record of current index**. Press **[ENTER]** and, sure enough, you will go to the first record. As you "page" through, you can see that it is now arranged alphabetically, according to author.

But, what if you have a few more records, or even a few hundred more records? To save time there is a way to pick out an individual book, again using the **Goto** command. Press **[f5]** again, but instead of picking one of the standard options, this time type in the surname **Watson**. Press **[ENTER]** and a book written by Watson appears on the screen. To check for other books by the same author, you can use the **[PAGE]** key as usual.

But, what if you only had the title of the book, not the author. To search for a book called *Busman's Holiday* you would first need to change the index back to **Title**, by using the **[f2]** option as before. Then you can type in the title of the book and it will be found in the same way.

But do you need to enter the entire title, or the entire name, to be able to find the book? Often, when searching for a particular item, people are unsure of the precise wording or spelling. For this reason LocoFile allows a good deal of leeway. You can, for instance, type in the first three letters, **Bus**, and it will still manage to find the book Busman's Holiday (see our fourth screenshot).

Inflationary measures

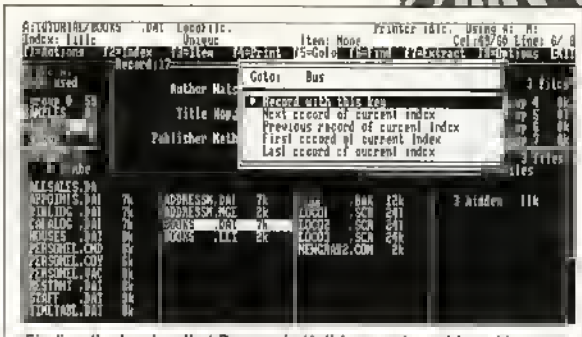
Apart from locating records, changing them must be the next most important function of LocoFile. For example, if the prices were increased, you would need to change the details on the database. Let's say that the book *HopJoy was Here* suddenly went up to £12.95. To change the price, you would first need to retrieve that record, using one of the above methods. Then, when it is displayed on the screen, it can be changed by firstly pressing **[ENTER]**. A box appears around the Author. Press **[ENTER]** twice more, and the box moves on to the Price. The old price is deleted using the [DELETE] keys, and a new price can be entered (see our final screenshot).

There are two more ways of moving the "editing" box: it can be moved backwards, to the previous field, by using the **[RELAY]** key. Alternatively the box can be moved at random by using the cursor keys.

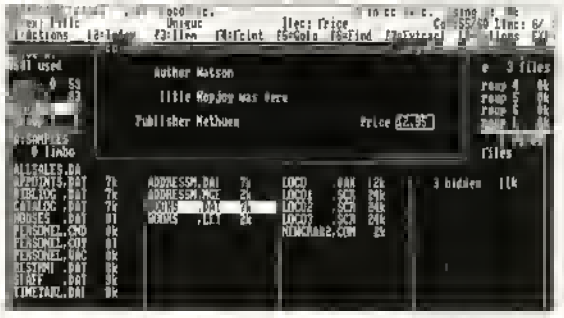
Any changes to the data need to be preserved by saving the amended file. This happens automatically when you exit the program.

This month we have covered the basic LocoFile functions – finding a record, changing a record and loading up and saving a LocoFile database. It is well worth playing around with these functions until you feel completely confident with them.

Once you can load up LocoFile, and you are comfortable with finding and changing records, you are ready to strike out on your own. Next month we will look at setting up a simple customer database for a small business. ●



Finding the book called Busman's Holiday can be achieved by searching for the first few letters, Bus, in the current index



Inflation is no problem when it is this easy to change the price

Hints & Tips

● **Need to find a data file in a hurry? Make things easy on yourself by following this simple rule. Give all of your data files the suffix .DAT. Then they will always stand out from the crowd.**

● **A quick way to choose the Run LocoFile option (see our first screenshot) is to simply press [R] [ENTER]. This avoids the need to scroll down the menu.**

Price or prize?

LocoFile on its own costs £29.95; LocoFile and LocoScript 2 together cost £49.90. They are available from Locomotive Software on (0306) 740606. But, if you're feeling lucky, why not enter our competition on this month's Back Page? We've got three copies of LocoFile to give away!

Tip of the Month!

Whenever possible, you should work from the M drive. This allows you to benefit from the extra speed and provides you with a constant copy of the original data.

But, take special care at the end of the day. You must copy the file back on to the A drive, or you could lose many hours of hard work.

Jargon Buster

The world of Information Technology can be a layman's nightmare, having a vocabulary all of its very own. Even the phrase 'Information Technology' is only vaguely understood by many people. In fact, the term means exactly what it says: the storage of words and figures (hence "Information") on a computer (loosely named "Technology"). Now why couldn't they say that in the first place?

Fortunately, the LocoFile lingo is just as apt for the database down at your local bank. A "record" down at the local bank probably means you – or more to the point, your account. In other words, each record on the bank database would contain a certain amount of information, pertaining to your account.

On the other hand, in our LocoFile example, each record relates to a particular book.

To go one step further, each individual piece of information is entered into a "field". In our LocoFile example, each record has only four fields; the author, the title, the publisher and the price.

The big picture is of course the database itself – any collection of organised information.

Carbon Copy

Replacing a carbon film ribbon for the PCW9512 used to mean buying a whole new cassette – until now. We find out how you can replace carbon ribbons in the comfort of your own home – and save pounds into the bargain

Replacing ribbons is probably not something which most people consider if they are owners of the carbon film (or multistrike) variety. After all, they cannot be 'refreshed', like their fabric cousins, and once expired, the carbon film ribbon is often tattered and punctured. The only thing which remains intact is the cassette (the plastic housing for the ribbon) itself.

And this is precisely the foundation upon which Scotland-based Aladdink have modelled their carbon film ribbon replacement kit. Why throw away a basic piece of equipment, when it can be used over and over again? Aladdink's 'kit' allows you to replace just the ribbon, retaining the cassette for further use. With replacement cassettes costing anything from £3.00 upwards each time (and some high street retailers will charge over £6.00 for one carbon film ribbon), a cheaper way to keep your output clean and clear has got to be welcomed. Aladdink charge £1.50 per replacement ribbon (see Fact File in the margin) – and you don't have to be a wizard mathematician to work out just how much money you can save by tackling replacement yourself.

However, as is the case with practically everything DtY, there is always the question of whether it is worth spending the time and effort on trying to emulate the work of the true professionals. Can you really expect tip top results from your homespun efforts? 8000 Plus decided to find out.

But what is the difference between carbon film and fabric ribbons? Multistrike manufacturers claim several advantages of their product over its fabric counterpart.

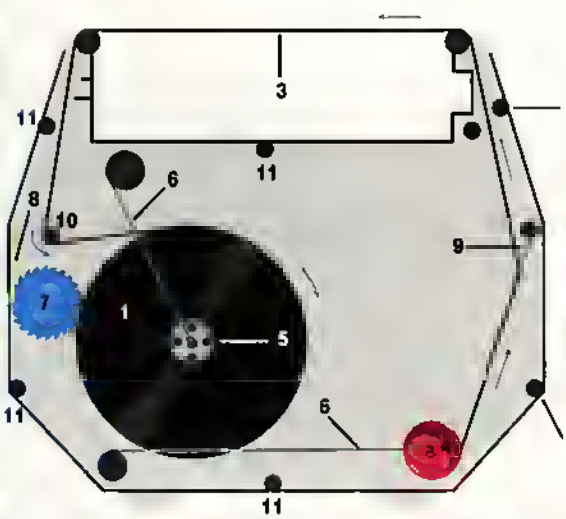
Their reasons are as follows. First of all, carbon ribbons produce a much sharper, cleaner output, and for this reason are the preferred choice for the production of work for submission to professional organisations. The second reason for choosing carbon film ribbons is that they are 'kinder' to the daisywheel printhead. The mesh structure of a fabric ribbon can cause damage to the 9512 printer, because of the risk of tearing. Also, the type of ink which is used can cause messy deposits on the printhead, which could lead to clogging. This is what can create 'fuzziness' on the printed page.

If you are using a fabric ribbon for your 9512, and you decide to change to the carbon film variety, you will need to buy a new cassette. Fabric and carbon cassettes are not interchangeable, because of their differing internal design. The fabric ribbon consists of a long, continuous 'loop', whereas the carbon film variety operates via a spool to spool system.

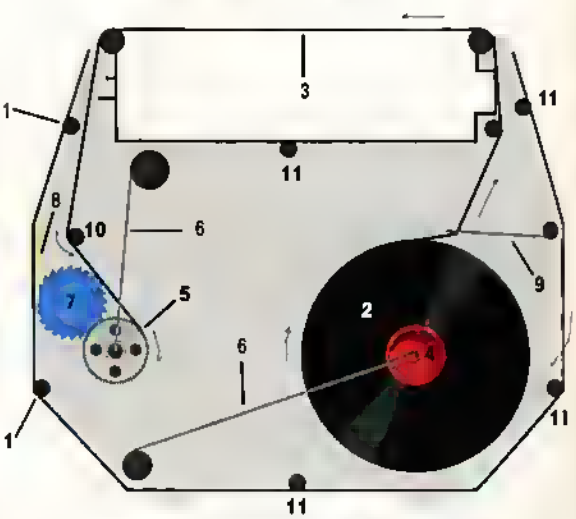
So, now to the operation itself. One piece of advice: before you start, make sure that you have everything that you are going to need close to hand. The replacement procedure can be fiddly, and you will not want to have your attention diverted by lack of equipment. The rest is simple – and the ease of the process will come as a pleasant surprise.

Next month, we continue our series of DIY maintenance programmes with a look at PCW9512 printer repairs. When you are sure that both the ribbon and the printwheel are in good order, but you are still getting less than perfect output, it could well be that part of the printhead is broken or damaged. The good news is that repairs are easy to carry out – and will save a hefty bill from the dealer. Don't miss next month's step by step guide!

Before replacement



After replacement



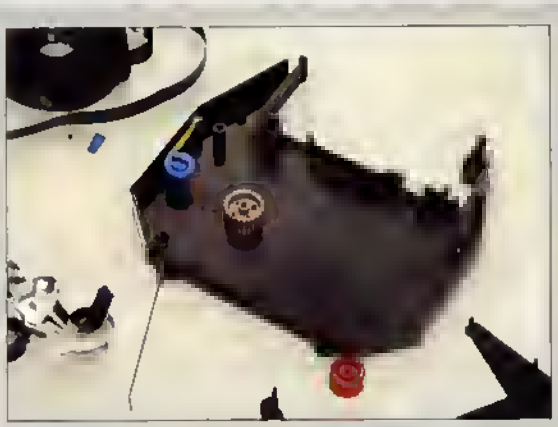
1 Used ribbon spool – the used ribbon is often fully unwound out of the cassette case, leaving a loose end. Notice how the ribbon is punctured by the cogs of the blue driver
2 New ribbon spool – this has about 8 inches of clear tape at the beginning, and a tab of adhesive tape for attachment to the roller
3 Carbon film ribbon – must be taut between the feeder jaws
4 Red roller – forms the hub for the new spool of ribbon
5 Grey roller – the receiving hub for the ribbon as it winds on
6 Holding spring – secures both hubs to the cassette box
7 Driver – the external and internal ribbon winding mechanism
8 Driver spring – maintains tension on the driver hub
9 Tension spring – maintains correct tension of the new ribbon
10 Guidepost – ribbon is always fed around the outside of a post
11 Lug – secures the cassette lid to its base

Fact File

- Aladdink will supply replacement spools of ribbon for £1.50 each, plus 99p per order. They have multiple spool kits; a pack of five refills will cost £8.49, bringing the cost of each 'new' cassette down to £1.70. If – even after following our walkthrough – you would still prefer not to undertake the replacement procedure for yourself, Aladdink will do it for you, at a cost of £2.00 per ribbon, plus 99p per order. Contact them at Eyemouth, Berwickshire, TD14 5AP, telephone (08907) 50965
- Carbon film ribbons are the order of the day if you are using your PCW for producing legal documents of any kind. The ink is not removable using the standard 'press on, lift off' ink erasers which you can buy in high street stationers.
- A new PCW9512 comes with a carbon film ribbon as standard. However, if you wish to change to a fabric ribbon, you will need to reset the printer. Press [PTR] followed by [8], and change the setting from 'film' to 'cloth'. This will customise the pressure and speed of the printhead hammers to suit the fabric ribbon.
- An 'average' carbon film ribbon measures 210 metres in length, and will provide a yield of approximately 100,000 characters.

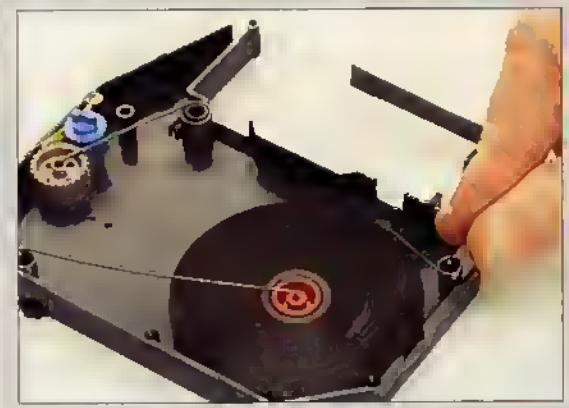
1 The first step is to remove the lid of the cassette. The best technique is to slide the knife edge across the gap you have created until you meet with some resistance. This comes in the form of one of the plastic 'lugs' which secure the cassette lid to the base. Once you have encountered one of these, simply take the knife out, re-insert it beyond the lug, and continue your course around the perimeter of the lid. The end result will be a raised lid, which will lift off with only slight resistance from the plastic lugs.

2 Put the cassette lid to one side. Don't worry if you have snapped a couple of the plastic lugs when removing the lid. Take a look at the contents of the used cassette, and check the various components against the diagram opposite. The next step is to release the two holding springs, which are attached to the red and grey rollers. The red roller can then be taken out of the cassette, and put to one side in preparation for use with the new cassette. Now, lift the tension spring clear of the used ribbon.



3 Remove the used spool of ribbon from the cassette box. Push out the grey roller, and put to one side. What remains is an empty cassette, with the various component parts freed from their anchor points. Take care not to lose any of these; they are not easy to replace. Check that everything is still there; one thing which can be discarded is the plastic ring which comes away when you release the red roller. Now clear the work surface of any clutter, such as the old ribbon, or the cassette lid.

4 Place the new ribbon inside the empty cassette, over to the right of the chamber. Take the red roller, and push it into the centre of the new spool of ribbon. The ribbon should be placed so that it unwinds clockwise out of the cassette, outside of the guide post. Take the end across to the opening of the other side of the cassette, and feed it back in to the chamber – again, outside the guide post. Use the self adhesive tape on the end of the ribbon to fix it to the grey roller, so that it winds on clockwise.



5 Now, take the arm of the lower (and longer) of the two holding springs and insert it into the centre of the red roller which is in the middle of the new ribbon. Take the upper holding spring and place it in the centre of the grey roller. Make sure that the grey roller sits flush against the blue driver cog. Lift the tension spring over the stretch of unwound ribbon where it leaves the main spool. Take care not to trap the ribbon underneath the end of the tension spring arm.

6 The final stage is to replace the cassette lid. The chief area of concern here is the blue driver. During the ribbon replacement procedure, it is more than likely that the driver will have become dislodged from its housing in a small hole in the bottom of the cassette. The cassette lid has a corresponding hole for the top of the driver. Using your knife edge to press down on the driver, place the lid over the driver head and line it up with all the lug chambers. Then, gently press the lid back into position.

Hints & Tips

- **Step 1:** A penknife is a good tool to use for prising the lid from the cassette. It is sharp enough to make the initial 'incision', and blunt enough not to damage the plastic casing. This is the only piece of 'equipment' required for the job, other than a new spool of ribbon.
- **Step 1:** Be sure to hold the cassette firmly to the work surface when removing the lid. There are a number of small, loose parts inside the cassette, all of which need to be re-positioned towards the end of the operation.
- **Step 2:** When you need to lift the holding or tension springs, use the tip of your knife to do so, rather than your fingers. This will facilitate access and improve control.
- **Step 4:** Before you place the new spool into the empty chamber, unwind a small section of ribbon. The area inside the cassette is a very small one for adult hands to work in, and with parts still loose at this stage, unwinding from scratch with the ribbon in place could be very fiddly.
- **Step 6:** With all the plastic lugs aligned with their 'housings', the best way of securing the lid to the base is to press down gently with the palm of your hand. Then, wind the ribbon on until it occupies the entire width between each feeder jaw.

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[illegible]	[illegible]	[illegible]	[illegible]

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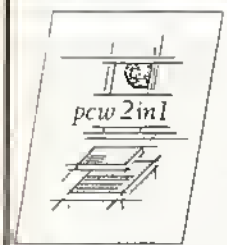

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Food for Thought

Judith White and her PCW are promoting European tastes, on this side of the channel. Karen Donaghay went in search of their special recipe for success

An American tourist, an impatient husband and an enduring love of French food proved to be a winning combination for Judith White. It was one that prompted a trail of discovery, spanning three years and countless trips to France. As a result, Judith is now the proud publisher of her very own book.

Judith recalled the fateful night. "I was sitting in a French restaurant," she said, "when an American tourist on the next table was having problems with the menu". Judith, a fluent French speaker, was called to the rescue. When she returned to her own table, and the inevitably cold meal, her husband suggested, somewhat wryly, that she should compile her own translated list of French food. Then perhaps they could enjoy their meal in peace.

Not the sort of comment to be taken lightly by a PCW owner. Judith took him at his word, and soon after began to write Bon Appétit; a guide to every French dish one can possibly imagine.

Starting with those dishes she already knew, Judith set about compiling a list. Being both a lover of France and a trained caterer, this preliminary collection alone amounted to a considerable number, and might well have proved sufficient for many people. But Judith wanted to go further. She then proceeded to scour her large collection of cookery books. By this time her PCW8256 was teeming with some of the most delicious culinary fare in the world.

Dish of the day

The dishes were entered into a LocoScript document, along with their English translations. At this stage they were not in any order – but then, Judith discovered Listings.

"In Issue 12 of 8000 Plus," she told us, "I came across a sorting program, which was exactly what I needed." Despite her initial wariness, the program worked perfectly, sorting the list into alphabetical order.

By now Judith was in her element. She started to view the dictionary as a serious publishing prospect and it was at this stage that she made her first major investment.

"I came across the SCA Rampac in an 8000 Plus review", she said, "and I realised that here was a product capable of sorting out my PCW's memory problems." The Rampac arrived two days later and her initial qualms proved to be unwarranted. "I'm not the world's most technical person", Judith admitted, "but even I could cope with the installation of the Rampac."

Meanwhile, she continued with her research, putting the finishing touches to her list of French dishes. "This was the fun part," she laughed. Several more trips across the channel were called for – all in the line of duty, of course.

"I generally head for the more remote areas," Judith told us – a predilection that led to the discovery of many regional specialities to add to her list. One of her favourite entries is The Parson's Nose, viewed with trepidation by most English folk. The French ➤

Bon Appétit!

The pocket-sized book, Bon Appétit, includes a guide to eating out in France, plus over 3500 definitions of mouth-watering French dishes.

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Power pack

The Rampac that provided Judith with a new surge of PCW power can be brought from SCA Systems Ltd., 61 Ferringham Lane, Ferring, Worthing, West Sussex, BN12 5LW. It costs £228.85 including postage and VAT and the number to ring for more information is (0903) 700288.

Hot off the press

Printing costs can be drastically reduced if you are prepared to jump in at the deep end with a bulk order. So, if you require 6000 copies, then the cost of producing each book could be less than a pound.

description, however, is rather more endearing, as Judith happily explained.

"They call it *Le sot l'y laisse*," she told us. "Its literal translation is *the fool leaves it*."

So, could Bon Appétit be one way of enticing the English away from their meat and two veg? "Certainly," she agreed. "French food is incredibly varied, but most people want to know what they are ordering, before it turns up on the plate – rather than after."

Copy-right

To prove her point, Judith promptly produced a copy of Bon Appétit. Sure enough, the small volume was packed with exotic descriptions – enough to make most English menus pale in comparison.

More surprising, however, was the book itself. Self-publishing often means poor quality; but Bon Appétit passed this test with flying colours. The cover would not look out of place in any smart bookstore and its simple design, based on the French national flag, was Judith's own idea. Every page within is attractively presented and easy to read.

Once again, the decision to go it alone was inspired by an article in 8000 Plus. "Be your own publisher", the first sentence promised: an exhortation that could easily have been written for Judith White personally.

"I found the advice invaluable" she said. "There is more to self-publishing than meets the eye, and it is helpful to know what's around the corner." This sounded like the voice of experience, so what – we wondered – should an aspiring self-publisher look out for?

"The thing to remember," she explained, "is that publishing involves more than just writing the book, paying the printers and then forgetting it completely. The whole process is actually quite involved."

Judith's first publishing task was to decide on the layout of the book. An artistic friend compiled some illustrations, and Judith designed the cover herself. The next step was potentially tricky; to transform her LocoScript notes into the final book.

"I was lucky enough to find a printer, in my home town, who owned a PCW," said Judith. The 3" disc, containing her masterpiece, was duly handed over. "I don't understand the printing process at all," she admitted freely. "All I know is that Bon Appétit came out at the other end".

Nice to know that some things in life are simple but, with no less than 6000 copies of Bon Appétit on her hands, the work for Judith and her PCW had only just begun.

Market day

Marketing is not just for high powered executives, and Judith is a tireless campaigner for her own book. "Most bookshops will throw a selling letter into the bin," she said. "It is far more rewarding to turn up in person."

This meant several trips around the bookstores of London but, even when they placed an order, there was no room for complacency. "Most will only take a few copies to begin with," she explained, "and the bigger bookshops don't always realise when the last copy has been sold, so they don't automatically re-order."

It was beginning to sound like an administrative nightmare but, with her PCW, Judith has worked out a system for keeping up with the marketing. "My PCW keeps a list of all of the buyers in a Mini Office database," she explained, "Then I produce mailing lists at regular intervals to remind my customers to re-order Bon Appétit."

Mini Office is also invaluable for providing invoices, statements and even the occasional final demand.

Luckily, dealing with harassed bookshop-owners is not the only way to sell your own book, as Judith discovered. "I actually sell more copies of Bon Appétit through mail-order," she told us. Judith advertises in several newspapers and magazines, and even does her own analysis of the sales response. "When I receive an order, I enter it into my Mini Office database, and this tells me which advertising space generates the most attention."

She was delighted to find that her book was well received by some of the nation's top food experts. Both the BBC's *Good Food Guide* and *Homes &Gardens* magazine recommended it highly. "This book is invaluable", raved the *Good Food Guide*, and *Homes & Gardens* succinctly described Bon Appétit as "brilliant".

Once the orders started flooding in, Judith turned to her PCW to keep things under control. Mini Office handles all of her accounts and the programs' graphics module can produce an instant picture of the profits and losses on a pie chart.

With Judith's skills as a book compiler and administrator, Bon Appétit looks sure to be a success. But what was next in store for this enterprising PCW user? Buon Appetito, perhaps? Judith thought not.

"I don't think there would be the market for it," she commented. "And besides," she added, "I don't speak a word of Italian."

Her next book, we discovered, is more likely to be a French recipe collection. "The only difficulty", she said, "is that it is hard to think of a novel idea for a recipe book."

Whatever she chooses as her next venture, Judith and her PCW8256 are sure to rise to the challenge. But, for the time being, Bon Appétit remains her major project.

Those summer months will be crucial to its success, and a few more trips to France will doubtless be called for – this time for selling purposes.

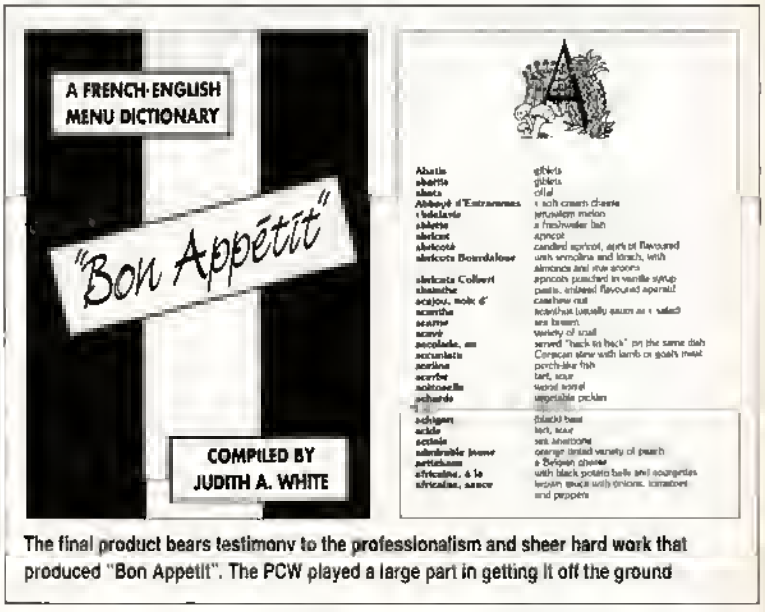
So, woe betide any American tourist who needs advice on *Le Menu* , Judith is sure to seize the opportunity to sell them a copy of Bon Appétit, before returning to another cold meal, and, of course, her long-suffering husband. But, as they say in France, C'est la vie! ●

Into print

Judith's friendly local printer – with the good taste in computers – was Mann's Fordham Printers, 27 Market Street, Fordham, Ely, Cambs, CB6 1AS. The diminutive 3" disc is no hurdle to these people – they use the PCW themselves.

Garlic breadth

Just as the eskimos have more than fifty names for snow, so the French have a fair few names for garlic. Bon Appetit lists various versions: ail, chapon a l'ail, aillade, pain a l'aillade, ailli, aittoli and aioti. Phew! This means – for any aspiring garlophiles – garlic, cold garlic bread, garlic sauce, toasted garlic bread, garlic-flavoured and the last two refer to mayonnaise with pounded garlic.



The final product bears testimony to the professionalism and sheer hard work that produced "Bon Appetit". The PCW played a large part in getting it off the ground

Sound Advice

"I couldn't have done it without 8000 Plus" said dedicated reader, Judith White. Here are some of the articles that pointed her along the road to publishing success.

"Bringing to Book" by Mike Gerrard was a feature all about publishing your own book and featured in 8000 Plus in the March 1990 issue. Two more articles on DIY publishing can be found in our April '89 and May '89 issues.

The Listings program that put Bon Appétit into alphabetical order was way back in those good ol' 8000 Plus days of September '87. Finally, our review of the SCA Rampac was rather more recent and can be found in the February 1990 issue.

It just goes to show that, with good advice, anything's possible!

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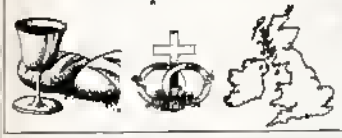

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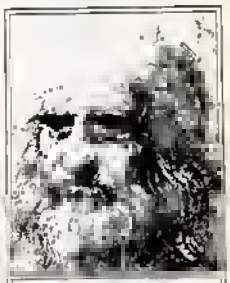

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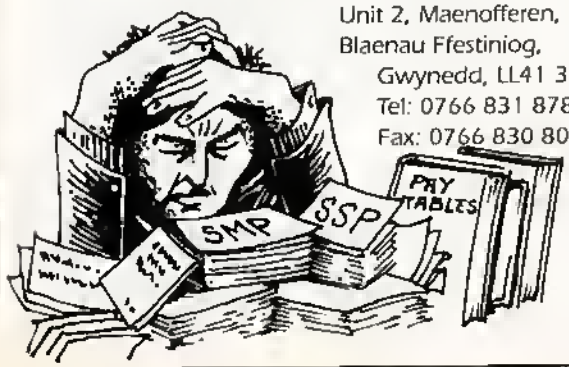

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BOOK LOOK

EXPLOITING THE AMSTRAD PCW 9512

by John Campbell and Marion Pye

£14.95 ● Heinemann New Tech ● Halley Court, Jordan Hill, Oxford
ISBN 0 7506 0075 6

Value Verdict = Well worth reading

This book starts off by telling you that you are normal. You bought your first computer, you got it home and set it up. But you didn't immediately start to program in assembler, talk to computers on the other side of the world, or control aeroplanes landing at Heathrow.

Instead, you got your computer home, eventually plucked up the courage to switch it on, loaded up LocoScript and stayed there. And if the authors of this book are to be believed, you stayed there (or will stay there) for an average of eight months before you even started to consider using your computer for anything else.

The first time owner who has never experienced the thrill of a computer keyboard before usually wants to spend time sorting things out, and discovering that computers are not the dread instruments of late twentieth century manipulation that they are often imagined to be.

It is only when these new users – if they are PCW owners – feel quite safe in the LocoScript environment, and feel confident that they know how the computer will react if things go wrong, that they will begin to explore beyond its confines.

Back to School

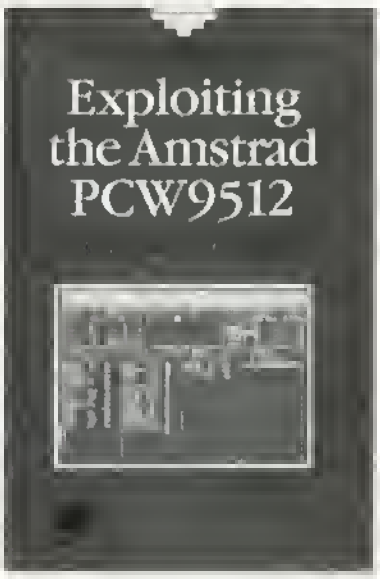
Even so, it is at first a bit surprising that the book spends so much time concentrating on LocoScript. "Aha," you say. "Fine for the beginner, but I know all I need to know about LocoScript."

Perhaps so, but perhaps not. If you have been using the package for some time there are very probably several functions which you read about (or missed out altogether) in that first frenzied flick through the manual, which you did not need immediately, and which you have subsequently forgotten. Or you may have picked up some computing habits (both good and bad) which it would be a good idea to scrutinise alongside somebody else's suggestions.

Seen in this light, the first part of the book suddenly becomes more valuable. It is certainly very readable, adopting what it refers to as a "belt and braces approach". All the typing and keystroking sequences are clearly labelled, with liberal use of bold printing, square brackets and numbered paragraphs, and there are plenty of screenshots as illustrations. Each page is given a heading indicating exactly what it deals with, saving much frustration if you are using the book for reference.

Subjects are dealt with in a logical order, with the bare essentials first, and the more refined niceties later. The pace of the book means that some things have to be omitted – it does not, for instance, mention every possible reason for using individual facilities, nor is it packed full of wickedly clever tips.

The reader is occasionally referred back to the User Guide for a complete description of certain subjects – another reason why this may not be the ideal



So, exploitation can be respectable after all!

book for the total novice – but if you are sent back to the manual, you can be sure that you will view it with the confidence of someone who already understands the background into which any new information will be assimilated.

LocoMail and LocoSpell (which come packaged with the 9512's LocoScript) are dealt with at the end of the LocoScript section. Again, the coverage given to them does not get bogged down in details, but presents a selection of examples to type in and follow. These should give you enough information to be able to go back to the manual and understand what is going on!

The other disc

Having consolidated LocoScript, the book moves on to what should be considered its main strength. There are few really simple guides to CP/M, and it is refreshing to find one here.

It is all too easy for a CP/M guide to become a nightmarish list of options, parameters and jargon. Not so here. The important and more commonly used utilities are dealt with simply and efficiently, but room is also given to those utilities which are only of interest to the 9512, and so which are normally swept under the carpet.

So it is good to see a section on 8000COPY, the little known utility that makes discs intended for the 8512's single density drive readable on the 9512. It won't necessarily make programs written for the 8512 work on its higher-numbered brother (a fact that the book doesn't make prominent) but it will allow you to read data that would otherwise be inaccessible.

Stepping out

The final section of the book is where the exploiting really begins. Eight months with your computer, and you are beginning to look kindly on the machine, and thinking that perhaps you might begin to use it to run your life and business. You need more than a word processor, you need a database and a spreadsheet.

But where to begin? Well, this book will give you some ideas. It goes through the basics of both sorts of application, using LocoFile (which works from within LocoScript), dBase II and SuperCalc2, applying the same easy approach that was given to LocoScript. Again, it is too much to hope for a complete tutorial in a few pages, but you ought to gain enough confidence and insight of any of these programs to be able to work your way through the respective manuals.

The culmination of the book is a chapter on Mini Office Professional. Again, a logical step forwards, since the package combines all the applications dealt with so far within a single, integrated suite of programs.

And for the rest of the PCW world? Well, some of the details in the book will not be relevant – the excellent sections on the daisywheel printer will pass over the 8000 user's dot matrix print head – but the general thrust is still very applicable. So, if you are beginning to get settled in your computing ways, or are beginning to think big, it may well be exactly the book that you are looking for, whatever your machine. ●

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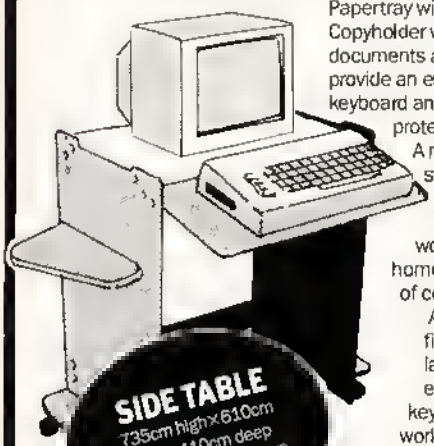

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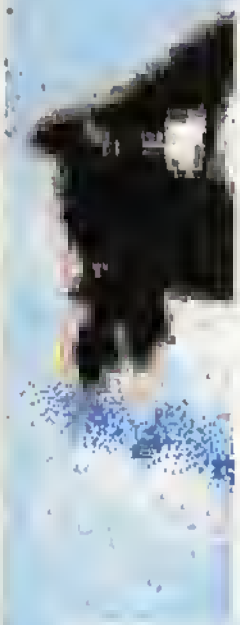
Up, Up and Away

When it comes to the power of the PCW, the sky's the limit. Qualified pilot Liz Bruce looks at a new flight simulation program for trainee aviators



Micro Nav
£60.00 ● Micro Nav Ltd
0425 480264 ● Mallard House
Duck Island Lane, Ringwood
Hampshire. BH24 3AA

The first thing to stress about Micro Nav is that it is a simulator written by and for use by, pilots; it is not a game. And the second is that it carries an appeal for non pilots as well. Anyone with an interest in flying, or simply looking for a challenge will discover this, although they would probably need access to a bunk on instrument flying to help them understand the essentials. Because the program was written for pilots, the supplied documentation is prepared with the assumption that the reader already understands the basics. Although Micro Nav is a simulation, it is not an aeroplane and its authenticity is limited by the computer and the control mechanisms. As the manual says, 'We take no responsibility for users of Micro Nav who believe that any amount of use of this program is a substitute for real instrument practice'.

Although this might sound like the kind of advice which could persuade you out of buying the program altogether, it is a sensible, cautionary statement. Sitting at a computer is not the same as subjecting your body to those misleading forces which sitting in an aeroplane in cloud creates; and equally, being an 'armchair' pilot will never allow you to experience the feeling of pure adrenalin that being totally lost in the clouds can.

Fasten your seat belts...

However, many pilots have found that using Micro Nav can cut down the hours they need to spend in the air learning on instruments. It can also help pilots to 'keep their hands in' when they are not doing regular instrument flying.

In addition, Micro Nav permits you to take your time to become familiar with the aircraft's instruments, what they tell you and how they react to control inputs. With a simulation such as this, if the work load gets too heavy, you can stop the program, think about it, and resume when the sweat has dried. You can also save your position and re-run from that point as many times as you like. This is useful, for instance, for practising landing approaches from the same position but under varying weather conditions. And, thankfully, error messages such as 'gear limit exceeded' mean 'start again' – not 'call the emergency services.'

The program itself comes on one 180k disc which will run on either the 8000 series of PCWs, or, using the 8000 copy option (instructions enclosed) on the PCW 9512.

On the computing side, the manual is a paragon of clarity and will allow you to have the program up and running with the minimum of fuss. The disc is not 'write protected', meaning you can make back-up copies . This is useful, as you can set up different discs to 'boot' different default practice flights.

The opening screen presents a menu with six options but while you are just beginning, you only need to 'Run Simulation' and you're straight into the flying. The default flight is fully described in the booklet, so without knowing anything else you can 'fly' the program from scratch (although it would be advisable to at least read through the description of that flight beforehand).

With the basics well within your grasp, you can then investigate the other options on offer.

It's logical, Captain

The operation of the program, is to a large extent, based on simple logic. The database manager gives access, not surprisingly, to the databases. You can keep as many as you like on a library of discs and load the one you want. Each database holds up to 40 navigation aids at one time. You can also print out any database for your records.

The environment manager lets you load environment files, which means you can save a flight at any time and return to exactly that point. You can also alter all the aspects of the environment and the weather conditions. These include wind

Perfect take-off

Micro Nav's inventors, Mike Male and Fred Johnson, were both Air Traffic Controllers. They had plenty of experience in steering lost pilots who had got themselves into poor conditions without the expertise to get out of them again.

As pilots themselves, they were also all too well aware of the high cost of private flying and training. Instruction costs about £70.00 an hour, and at that price, the prospect of watching the seconds tick away learning how to master instrument flying are somewhat painful, when you consider the more exciting things which can be done while one has the freedom of the skies.

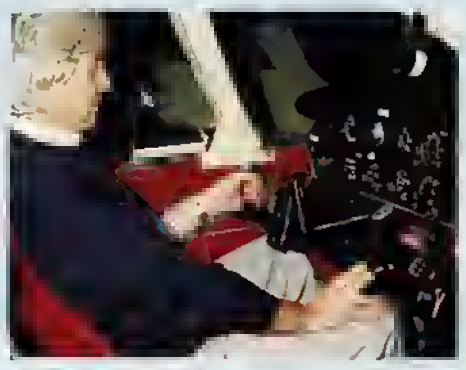
With a background in computers, Mike and Fred got together and wrote Micro Nav originally for the BBC, and the Commodore 64. When the PCW version was produced, the program really began to take off. They have now produced a PC version, including various extra features such as allowing different aircraft types to be used. Now, the pair are busy designing air traffic control simulators for training purposes.

One keen fan of Micro Nav is Ian McLaren. Ian has his own business, Meditek, based in Fife. Meditek maintains and repairs large industrial and medical x-ray equipment and Ian has used a PCW 8512 to help him run the business for several years. He was delighted when he found he could also use his PCW 8512 to practice instrument flying, using Micro Nav.

Although Ian drives to his routine appointments, he also has to deal with emergencies. Where sophisticated medical equipment is concerned, repairs may have to be carried out as soon as humanly possible.To cut his response time to these emergency calls, which may come from virtually anywhere in Britain, Ian makes use of the 'self-fly' hire aircraft available from Tayside Aviation, based at Dundee. He flies to the airport closest to the location of the broken equipment with his tools in the back of the aircraft.

Micro Nav helps him 'keep his hand in' when he is not flying frequently and has helped him gain the confidence to use the instruments in the aircraft far more fully, particularly the radio navigation aids.

Ian particularly appreciates being able to set up Nav-aids in his own databases, allowing him to plan and practice an actual flight, picking up the radio aids and using them just as he would the real ones on the real flight. His verdict on the PCW and Micro Nav? Ian wouldn't be without either of them!



Ian McClaren and a company vehicle with a difference

direction, speed and sheer, visibility, cloud base, fuel state and so on. This is particularly useful if you want to practice an approach or cross-country sector several times with gradually deteriorating weather.

The Map Manager gives you access to a map of Northern Europe and you can centre a cursor box on the position of the aircraft with one key stroke. You can then 'zoom' and 'unzoom' the box, enlarging or reducing the scale.

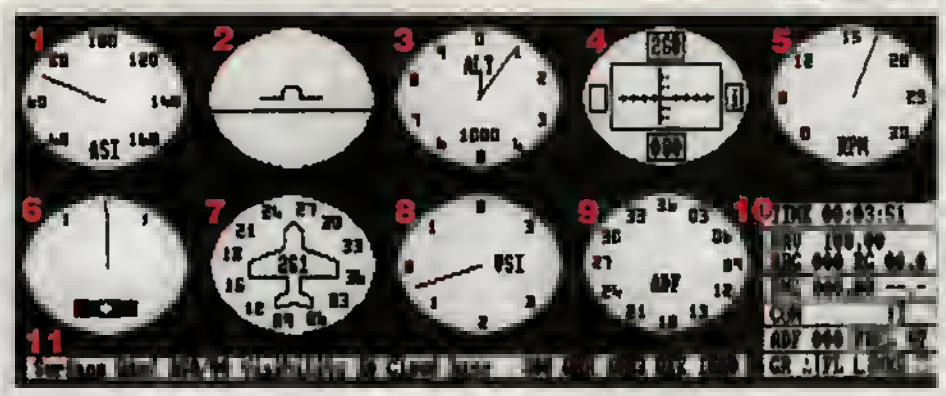
The larger scale maps show the navaids set up for that part of the country and you can also show the identification letters of any category of aid. The aircraft history and track can be shown on the maps which, of course, is very useful if you are completely lost. As well as the maps, there is an approach chart, showing a centreline and glideslope graphic, with your current track shown.

The other two options get you into the flying. 'Run Simulation' sets you up either at the beginning of the default flight or one you have selected. 'Demo Manager' lets you watch the computer flying one of the supplied flights, or you can set up one of your own.

The supplied demonstrations are matched by the supplied set-up flights. It may well be that the best approach to learning, particularly for the non-pilot, is to watch the demonstration, referring to the notes in the booklet, and then try flying it themselves.

Extra mileage

There are lots of little touches which add much to the appeal of the program. These include the facility to accelerate the speed of the flight from real-time, so that long cross-country sectors with nothing much going on can be hurried up. Another is that you are able to hold the program at any point and investigate the maps or charts, or even display a morse table to refresh your memory. There is also the option to select a limited panel – a favourite of real instrument instructors.



1 Air Speed Indicator shows speed through air, not over ground. Usually in knots.
2 Artificial horizon shows aircraft attitude.
3 Altimeter shows height above ground or altitude above mean sea level in x1000 ft.
4 Instrument Landing System. Needles should be as shown, i.e. in middle showing on centre line and on glideslope. "Needle left, fly left" protocol.
5 Engine revs
6 Turn and slip indicator or "Needle and Ball". Turn is balanced if ball is in middle; if ball is not in middle, the aircraft is "skidding"
7 D.I. – Direction Indicator. Not a compass; easier to read but has no in-built North seeking. Has to be set to correct reading when powered up.
8 VSI – Vertical speed indicator shows ascent or descent rate in x100 ft per minute.
9 ADF – Artificial Direction Finder, a "radio compass".
10 Nav Box showing frequencies. Bottom panel shows: GR – gear – 3 greens = gear down, FL – flaps, currently down, MKR – lights up when far marker is crossed.
11 Bottom line shows meteorology report plus QFE and QNH, the altimeter settings to make either runway or sea level = 0 ft.

The simulation supports ADF, markers, ILS, NDB, VOR, VOR-DME, DME, RNAV – in fact, everything necessary to practice up to IR level. And that is where the problems for non-pilots occur. You are expected to know what these terms mean. However, it is perfectly possible, by following the demonstrations and then flying the supplied flights, to get by without actually knowing what they are.

Of course, the simulation itself is limited by the computer and the monitor. However, there's no problem with the instruments themselves – even in monochrome they are clear enough. The view of the ground is limited to approach and runway lights but that is in keeping with the whole concept of instrument flying – the idea is that you can't see anything outside the windscreen until the very last moment, when you should find yourself magically positioned for landing.

From a pilot's point of view, the simulation breaks down close to the ground as there is no way to make rudder inputs. The simulated aircraft always makes balanced turns, so the joystick controls ailerons and elevators only. In a real aircraft, near the ground the small corrections necessary are made mainly by rudder pedal, so using a joystick is fairly unrealistic.

Despite these minor points, Micro Nav is highly recommended to any pilot. It is enjoyable and addictive as well as useful, money saving and, possibly, life saving. As for non-pilots, if they're interested in flying, or just enjoy a good challenge, then Micro Nav will be of great interest to them.

Joystick

A joystick is useful accessory to have with MicroNav; trying to enter control movements from the keyboard feels rather awkward. A joystick also gives a more realistic feel of the aircraft itself.

Micro Nav

Pluses

- ▲ A real instrument program for pilots
- ▲ Same flight can be repeated under variable conditions
- ▲ Allows you to have database of navigation aids
- ▲ Excellent documentation (for pilots)

Minuses

- ▼ Lack of rudder makes simulation unrealistic close to ground
- ▼ Flying documentation could be difficult for non-pilots
- ▼ Cannot alter aircraft type or characteristics

Ease of use	5/5
Documentation	5/5
Features	4/5
Performance	4/5

8000 Plus Value Verdict 18/20

Instrument flying explained

Instrument flying seems to pose a problem for most trainee pilots. Commercial airline pilots, for all their prominence, only form a smallish percentage of the world's aviators, and in the realm of private flying those people flying under VFR (Visual Flight Rules) far outnumber those flying under IFR (Instrument Flight Rules or, when things get fraught, 'I Follow Roads').

Most pilots' introduction to instrument flying, however far they are into their training, comes as a bit of a shock.

After you've taken off and climbed to a safe height, your instructor tells you to close your eyes and tell him what you think the aircraft is doing, while he puts it through a series of what are politely known as 'unusual attitudes'. More often than not, each time the pilot tells the instructor what he believes to be the answer, he or she will be wrong. The reason for the mistakes lies in biology.

The human body has evolved on land and our brains interpret body position on the assumption we have our feet more or less on the ground. In a car, if you are pushed back into your seat, your brain interprets that as acceleration.

Unfortunately, in the air, although you could just be accelerating at a constant height, you could also simply be climbing or even going down, fast. All will push you back into your seat.

Your brain does not take these possibilities into account, it's not built to – if it were, we wouldn't need instruments in the first place. The first lesson in instrument flying is therefore simple but vital: you must believe the instruments and ignore what your body is telling you, however much the two conflict.

And therein lies the difficulty. To fly 'blind' requires constant and intense concentration, continuous attention to and interpretation of the instruments and very accurate flying.

This is fine for people with lots of training and constant practice, (and if you're panicking, remember the big boys fly on instruments all the time, even when they can see the ground – well, actually, the auto-pilot does) but ending up in cloud for more than just a few minutes can spell disaster to the pilot without instrument training or even one with a rating but without recent practice.

It is all too easy to become helplessly disoriented and, worse, to become convinced that the instruments are malfunctioning and fly determinedly either in the wrong direction or straight into the ground.

Wilson's Progress

PCW pragmatist David Wilson examines the heady process of change - and looks at the advantages of declining a lift from the industry bandwagon...

I shudder to think of it now, but I nearly didn't get a PCW in the first place. To me, a computer (a *real* computer, that is) was something that lived in a room of its own, coddled in filtered air, with security guards on the door to keep laypersons at a safe distance. Those were the good old days, when the poor devil who paid your wages had no choice but to take your word for it that the game of 4-D battleships you were playing was really an essential test routine.

Anyway, when my brother-in-law got tired of doing his books on parchment with a quill pen, I told him that if he bought a computer, I would show him how to use it. A friend of his already had a PCW, so he got one too – somewhat to my disappointment! Even in the early days of the PCW, it wasn't exactly at the leading edge of microcomputer science...

My brother-in-law bought an accounts program, I translated the manual into English for him, and thought no more about it. Then my brother-in-law's friend (remember him?) asked me to help him with a "very simple problem". He had been using LocoScript's 'Direct Printing' to do his invoices, but had found this so much of a fiddle that he'd gone back to a slightly earlier form of technology – the ballpoint pen. Could I possibly construct a LocoScript template that would do the business?

BASIC to the rescue

It only took five days, with the aid of the LocoScript 1 manual, for me to realise that my reputation ("He knows all about computers") was hanging by a fraying thread. This was before the birth of 8000 Plus, I need hardly say, so I didn't have any user-friendly articles to refer to. With a sinking feeling in my ego, I was about to admit failure, when I though of looking at the supplied BASIC (this was the era when the Mallard manual was supplied free with the machine). What a revelation! Instead of the clod-hopping BASICs I was used to seeing on cheap micros, Mallard was fast, comprehensive, and included a file-handling system which made my eyes pop out. As I fooled around with it, I also came to realise the advantages of having a dedicated printer which was completely software-controlled, and a monitor which made the normal 24x80 screen look like a postage stamp....

Well, before long, my invoice-writing program was a thing of transcendent beauty, with more features than you'd find at Madame Tussaud's. Customers' names and addresses were stored on disc, and called up by entering a number. All the nasty calculations were made by the program, the invoice was printed in a layout of breathtaking clarity, and the invoice details were stored in a Jetsam keyed file. In fact, if it hadn't been for all the bugs (the last of which was only squashed three years after the program was paid for), it would have been absolutely perfect. Still, as I always tell my clients, a program without bugs is like a dog without fleas – it simply can't exist in the real world.

"It only took five days, with the aid of the LocoScript 1 manual, to realise that my reputation ("He knows all about computers") was hanging by a fraying thread.."

From that time onwards, I became the leading (unpaid) PCW salesman in the western hemisphere. Obviously, there are specialist applications which require a high-speed processor, and umpteen megabytes of RAM, but for general business purposes... You've heard me say all this before, I know, but a computer spends a staggering proportion of its time waiting for its fumble-fingered operator to press the next key.

Environmentally friendly

Back in the Seventies, when only the biggest mainframe computers ran at more than a million operations per second, a very ingenious program was written for finding vast prime numbers. The ingenuity wasn't so much in the arithmetic routines, but in the program's 'environment'. It sat in the background while the computer was doing all the boring things its owners has bought it to do, but between keystrokes on the input keyboard it thought about prime numbers.

Even a touch-typist can't manage more than about five or six keystrokes a second, but a second is a long, long time for a fast computer. These days, for the price of a cheap car, you could buy a microcomputer rated at 28.5 million operations per second... The mind boggles.

Of course, I would love to have one of the latest hot-rod micros to play with, just as I'd like to have a Ferrari (if someone else would pay all the bills). But in the real world, why pay £100,000 for a Ferrari, when all you are really going to do is to drive to the shops and back? Some of the recent add-on hardware developments have made the PCW even more attractive – a plug-in RAM extension, plus the 'Flipper' software, combine to give you the equivalent of an extra computer for about £150!

The merry go round

The pace of microcomputer development hasn't slowed down in the last few years, but the PCW's place in the market looks as solid as ever. The great thing about 'old technology' is that it's so well understood. The primitive Z80 chip which runs the PCW has few surprises left in store, and provided you don't want 65536 different colour combinations for your graphics, or three programs running at the same time, it'll do all that's really necessary. Modern micros use a tremendous amount of their processing power doing things that the normal user has no need for. The latest Sun workstation (that's the 28.5 mips machine I mentioned earlier) needs that phenomenal processing power for advanced graphics displays. If you think about a full-colour finely-detailed diagram of an aircraft carrier, rotating in three dimensions at the operator's whim, and consider the number of individual calculations that have to be make to keep things under control, you'll see what I mean.

I wish all mice would go back under the floorboards where they belong. When you need to do freehand drawing on the screen, a light-pen is the obvious solution, but this seems to have gone out of fashion. I really don't believe that you need to have a little picture of a waste-paper basket on the screen, and to 'drag' a pointer onto it with a mouse in order to delete a file... if you don't have to put up with this sort of relentless infantilism you should think yourself lucky. I've no objection to computing being made easy for the feeble-minded, but I intend to continue my stubborn resistance to compulsory puerility.

If the mouse-makers pass a death sentence on me, I'll have to go and live with Salman Rushdie, but I don't regret getting that burst of ill-feeling off my chest. The trouble is that computer manufacturers believe each others' publicity: if one firm introduces some futile gadget, all the others think they have to do the same. Such is life. Progress in computer hardware in my lifetime hasn't been fast – it has been explosive, and it would be unreasonable to expect such progress to be smooth. Have you ever tried to do word processing with a colour monitor? I wouldn't take one as a gift, unless I could keep my eyeball-friendly green screen for real work, but fogeys like me have long since been left behind! ●

"A powerful, versatile and highly professional tool" 8000 PLUS, September 1990

FOREWORD

THE WORD PRE-PROCESSOR

● FOREWORD is the new program from Software Imperative, the people who brought you FLIPPER. It's a tool for writers: not just authors (though they'll certainly want a copy) but letter writers, report writers, sermon writers – in fact, anyone who works with words.

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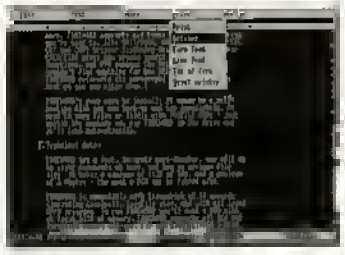
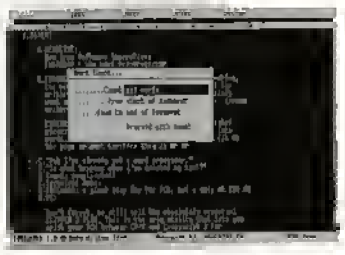


● A carefully designed menu system makes FOREWORD easy to learn and use.

"BUT I'VE ALREADY GOT A WORD PROCESSOR."

FOREWORD isn't a word processor, nor is it intended to replace one. Word processors are tools for presenting text on paper, and most of them do this very well. FOREWORD is designed for the stage before this, the creative stage of writing where your ideas are still too vague or unstructured for normal word processing. That's why we call it a "word pre-processor".

FOREWORD is specially designed to stop you getting bogged down in detail as your document grows. With a word processor, as soon as your text takes up more than a screenful you start losing that all-important "big picture" – the overview of your work that's the key to good writing. FOREWORD's powerful "Hide" and "Show" functions give you back that overview. Even when you've typed in thousands of words you can still get a clear picture of your piece at the press of a key, collapsing the on-screen document down to its bare bones.



● Writing for print? Then you'll appreciate FOREWORD'S fast, accurate word counter.

FOREWORD also shuffles ideas around far better than a WP can. The "Move" function lets you pick up an idea and move it wherever you like within the document, regardless of how much text the idea comes with. There's no block-marking involved: whether it's one sentence or a hundred, you can pick an idea up or put it down again with a single keypress.

"SO WHAT HAPPENS WHEN I'VE CREATED MY TEXT?"

Because FOREWORD doesn't deal with typefaces or layouts, you'll need to get your finished text into a word processor or DTP package before you can present it attractively on paper. Normally, transferring data from one program to another is a fiddly, time-consuming business, but FOREWORD makes the task quick and easy.

For one thing, there's no need to quit FOREWORD to use your word processor. FOREWORD is a pop-up program: it can share memory with Locoscript 2 or CP/M, hiding "in the background" until you summon it. Just hit SHIFT-ALT-EXTRA and in 1 second you'll be looking at the FOREWORD editing screen. Hit SHIFT-ALT-EXTRA again and 1 second later you'll be back in CP/M or Locoscript 2, exactly where you left off.

Also, you don't have to save ASCII files in FOREWORD and import them into your word processor. FOREWORD's "Transfer" function can force your text directly into a word processor document as if you were typing the words yourself. (Of course, if you find Transfer's 150-200 words per minute a little slow, FOREWORD is quite happy to save your text as ASCII: it supports two different kinds, plus a special format for WordStar and NewWord users.)

SOUNDS COMPLICATED?

Don't worry: FOREWORD has a carefully designed menu system you'll be able to master in minutes. What's more, FOREWORD supports all those special-purpose keys you're used to, like UNIT/PARA, WORD/CHAR and LINE/EOL. CUT and COPY trigger lightning-fast block operations, EXCH/FIND gives you speedy search and replace functions, and PTR summons the Printer menu. (We couldn't find anything for the RELAY key to do: FOREWORD reformats its paragraphs automatically, as fast as you can alter them.)

FOREWORD's even easy to install: it comes on a self-booting disk you can back-up and use immediately. No need to copy files or fiddle with PROFILE.SUBs – just switch the machine on, pop FOREWORD in the drive and it'll load automatically.

VITAL STATISTICS:

FOREWORD has a fast, accurate word-counter, can edit up to eight documents at once, and has no maximum file size. It takes a minimum of 112K of RAM, and a maximum of 2 Mbytes – the most a PCW can be fitted with.

FOREWORD is fully compatible with Locoscript v2.16 onwards (including LocoSpell, LocoFile etc), and with all legal CP/M programs. To run FOREWORD you'll need a PCW with at least 512K of memory. FOREWORD supports all SCA and Isenstein memory add-ons. For use with FLIPPER 2 PLUS, and with non-legal CP/M programs like Mini Office and Microdesign II, extra memory is essential. (FOREWORD won't work with earlier versions of FLIPPER, but you can upgrade these for free if you order FOREWORD at the same time.)

FOREWORD DOES NOT SUPPORT:

- File passwords and file time/date stamping;
- Foreign-language keyboards;
- Hard drives;
- Printers on external serial/parallel interfaces (though the 9512's built-in parallel port is fine);
- Single-density or single-sided B: drives (though 720K 5¼" or 3½" drives are okay).

DON'T FORGET:

We still sell the absolutely essential FLIPPER 2 PLUS. This is the only utility that lets you split your PCW between CP/M and Locoscript 2 (or between two lots of CP/M – or even between two lots of Locoscript 2, if you've got the memory).

In as little as two seconds FLIPPER 2 PLUS can whisk you from one side to the other, without losing your place. Why reboot every time you need to get between CP/M and Locoscript 2? FLIPPER 2 PLUS can do the job quicker and better. (FLIPPER 2 PLUS requires at least 512K of RAM, and is fully compatible with SCA and Isenstein memory add-ons.)

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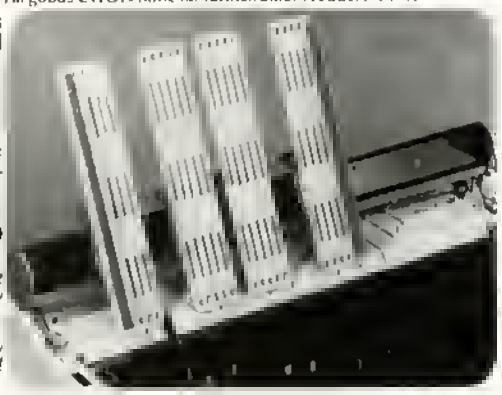

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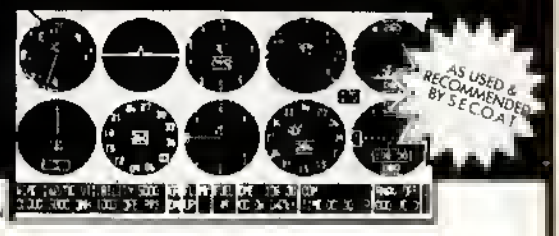

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In the Picture

This month, Alec Rae looks at how you can team up Micro Design with MasterScan to produce promotional material for your business

It's a well known fact that a picture is worth a thousand words. Mind you, if you have to do a 3000 word article for a magazine and you submit three pictures you may find a difference of opinion on that matter.

On the other hand if you try to produce a newsletter, brochure or price list totally without illustrations you could find yourself with even more problems.

A picture explains so much that words can't. It makes a page more interesting to look at. And it makes designing the page so much easier.

In previous issues we have looked at the way you can use clip art and the drawing facilities in Micro Design 2 to create interesting graphics. But unless you are of an artistic bent and pretty slick with the mouse, freehand drawings on the PCW can look pretty amateurish. And clip art is often slightly unsuitable or too general.

And, of course, there are times when only a photographic representation will do. If you are launching a new product you want to show your customer the goods – not just an artist's impression.

The answer is a scanner. This is a piece of equipment that will convert a picture into a graphic file that can be used in desktop publishing.

Scans for the memory

There are a couple of scanners available that are of particular interest to Micro Design 2 users. The ProSCAN handscanner, produced by Creative Technology (the people who brought you Micro Design) is designed for use with Micro Design and can produce quality images quickly and simply. You simply lay a picture on a flat surface, run the scanner over the image and it appears on the screen.

Because of the nature of the equipment it caters best for narrow strips of image about five inches wide – the width of scanning unit itself– although it is not too difficult to scan in wider images in small chunks, and then join them together.

Database Software's scanner unit, MasterScan, also creates graphic files that can be used in Micro Design. This simple but effective piece of equipment converts your PCW printer into a scanner. The scanning unit fits on the print head. You insert the the picture you want scanned in the printer roller and the unit is systematically run over the entire unit just as though you were printing.

And, if you happen to have a brand new piece of software from Philosoft called Graflink 2, this will allow you to handle full A4 page size images.

Picture or Snowstorm

But even with a scanner there are still are problems to be faced. The picture of your new product may look stunning in glossy full colour. But will it convert into something meaningful on your green screen?

You have to take into consideration the fact that your bright red pump against the striking royal blue background will appear as a grey pump against a grey background to the PCW. Unless you are lucky probably many colour photographs will come out like 'Snowstorm at Midnight'.

Obviously the best way to discover what kind of pictures work with a scanner is to carry out a few trials and see what happens. But as this is a rather time consuming pastime, it will quickly become obvious that you have to learn how to recognise a suitable image for scanning.

The best pictures have strong contrasts, a light object against a dark background or vice versa. Look for a shot where the main subject is well lit. Anything in shadow or too dark will end up like 'the Blob from Planet X'.

Don't try to get too much in to the picture. A close up of a small object will work far better than a long shot. It is possible to take a small image and blow it up but remember that is only a limited amount of detail in a picture. Each time you expand an image you realise how little detail there really is.

Keep everything as plain as possible. For instance, shooting something against a tartan background is liable to be counter-productive. It might sound artistic to shoot your premises from a long distance location through some leafy trees but it might cause problems to the PCW.

Artistic touch

Try to make it interesting. Often adding a figure or a simple prop will give life and meaning to your picture.

But, as anyone who has had anything to do with the production of a magazine knows, it is not always possible to get the ideal picture. Sometimes in some issues it seems impossible even to get one half decent picture. You often just have to make the best out of what you are given.

Still, there is no need to panic. As we have seen with clip art, the one thing about using a program like Micro Design 2 is that you can always make improvements to an image.

One vital task is to crop the picture correctly – that is, to trim it so that a specific area of the image is given prominence in the space which it occupies. There are newspapers sub-editors that make their living out of knowing how to take what they want out of a picture and discard the rest.

With the CUT facility in Micro Design, this task is made easier than ever. You can load up the picture and play about with the CUT box to see what all the possibilities are.

You can hone in on the key details, cut out great swathes of foreground in minutes and, if you make a complete mess of it, you can just re-load the file and start again. Try doing that with a guillotine and a 10 x 8 print.

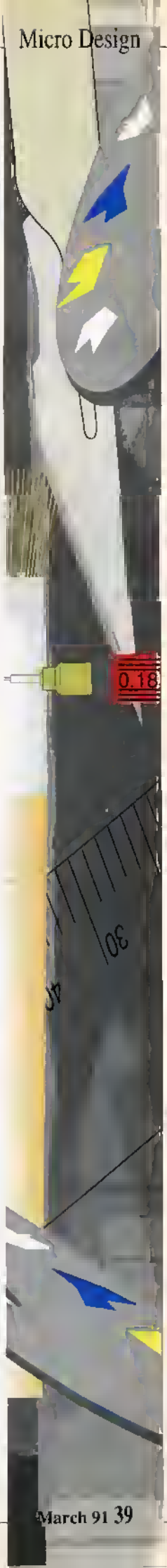
And if you are really worried that the image is not coming out as well as you hoped you can always modify it using Micro Design's graphic facilities.

If the background is too fussy you can paint it out in black or white using the paint facility. Or if some detail has been washed out in the scanning process you can put it back in using the Zoom feature, working on individual pixels. And conversely you can, just as easily, take out unwanted detail – the classic lamp-post looking as though it is growing out the top of someone's head, for instance.

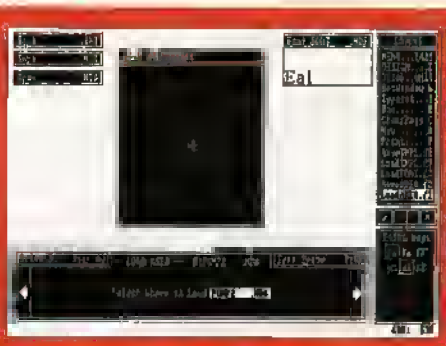
Get the digitiser out

As well as a scanner it is possible to use a digitiser to get photographic images. Digitisers are cunning devices that convert images captured on a VCR video recorder into pictures that you can use in the PCW.

As far as we know there are no digitisers that produce files that can be used directly in Micro Design 2, but if you have Stop Press you can load files from the Rombo Digitiser, save them as a .CUT file, and load them in Micro Design. Now let's have a look at how to create promotional material. ➤



1 Choosing a photograph



2 Scanning in the image

3 Defining an outline

1 This month we are going assume the role of a pump manufacturers. We are going to try to produce a sales flier to be used in a mail shot, about our latest exciting product. To the uninitiated, pumps, may not appear the most thrilling of subjects for graphic representation but if you have to sell them you want to show them off to their best advantage.

For this you naturally need a proper photograph of the product or no-one will believe that you've actually built it. Once you have the image on file you can also use it for a wide variety of purposes.

You can adapt it for a technical data sheet, showing all the interesting, new features. You could also use it as an interesting feature in your price list or, if it is good enough, you can even use it in your advertising.

But as always, nothing is ever as straightforward as we would like it to be, and for this exercise, life has set a few little problems in our way.

2 The major problem is getting a good picture. The only photograph we have at our disposal is a full colour image, showing a black pump against a blue and red background.

We scanned the picture using MasterScan to the highest quality and resolution we could. We did it twice, to try and achieve the correct balance of light and shade.

This produces one picture that is so washed out there is no detail or – one that is so dark that the pump looks like a massive black blob. This is not any fault with the scanner. It is a quite natural result if the photograph is not ideal.

It is best to choose the darker of the two images, as it is much easier to take out unwanted details later on, than to add various elements that have been missed out.

Load the picture in as usual, by using LoadAREA [f1] in the layout screen and then clicking on the correct file name.

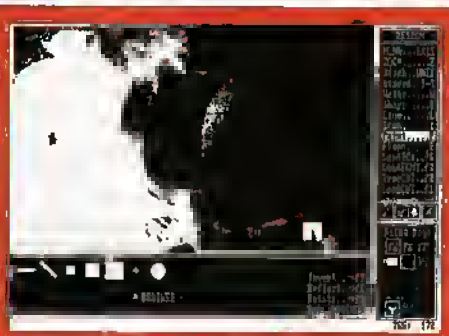
3 The problems are immediately obvious. In the layout screen, the file looks like a picture of a distant galaxy seen from the Hubble telescope. When you scan it is quite sensible to leave space around about the image you actually want to use. However you also want to get as big an image as possible. it is much easier to change details on a big picture and reduce it later.

Naturally, one of the first things you want to do is to get the outline right. It is amazing how this will change the most meaningless jumble into an easily recognisable image

Press [D] for Design and a box appears on screen. If you can recognise any obvious feature of the picture, use the cursor to move the box to that area, in preparation to start work.

Always start at the easiest, most obvious place. If there is no easy, obvious place just take pot luck and hope that you will recognise something.

4 Locating the image



5 Clearing the background

6 Considering the background

4 Press [RETURN] and you go to the Design screen. The area you chose in the box now fills the working screen.

Have the picture you have scanned in close to hand. If the image is really bad you may have to do the old jigsaw puzzle routine of matching up the small piece with the picture. Don't assume everything will be obvious. Details can very easily get lost completely and shapes merge with each other.

If you don't immediately recognise where you are, click on the downward pointing arrow just above the Extra Keys box. This produces the cursor arrows that allow you to move the chosen screen.

It is probably a good idea to move the screen back and forward a little anyway, just to gain a proper idea of where you actually are in the picture. It also helps you define the outline of the shape you are looking for.

5 Now to define the outline. Press [P] for Paint and the box under the screen offers you a variety of paint-brush shapes. For the rough work and for running along flat edges the largest box is useful. Click on that, and a box shaped cursor will appear on screen.

Click on the white box in the second row of the EXTRA Keys area. This allows you to paint in white. Naturally, if your main shape was light you would probably want to paint out the background in black.

By holding the right hand mouse key down and moving the mouse back and forward you can start clearing away the confusing background.

When you get into more delicate, detail work around the pump itself you can click on the small diamond shape. If you make a mistake and take away too much just click on the black square and fill it in again.

6 Obviously there may be white areas of the main image that will not stand out against a white background. This needs a delicate touch. If, as here, the background is a broken, speckled background the best idea is just to leave a thin line of grey to define the edge.

If there is no background to use you may have to draw in the edge. Don't be tempted to use the line drawing function or to try to draw it in free hand. This line has to be very subtle.

It is best to use the spray paint feature. You will see in the paint-brush area a variety of spray patterns. Choose the one second from the right, as this puts the least amount of paint on the screen, allowing you greater control. You can always go over it again later, if your first attempts do not produce a great enough effect. Again, the black box must be chosen in the EXTRA keys box.

7 Clearing surrounding areas

8 Finishing touches

9 Using the Zoom facility

7 Once you have cleared the background from this area, move on, using the cursor arrows, to clear other areas. Try to leave a bit of overlap each time so you have a cleer idea where the outline is each time.

At times this can be quite difficult. In this picture, for instance, the lower part of the background was dark red, which came out as dark black on the PCW.

Here you may need to simply take an educated guess as to the true outline of the image.

It is probably best to tend towards conservatism at these moments. It easier to go back and take more away than to try to replace details you have obliterated.

Also, remember that in these dark murky corners it may be better to ignore the more difficult details. Some things will just never come out right. So, unless they are really vital to the picture, you can well afford just to miss them out. Clarity is the chief concern at this stage.

8 Once you think you are getting close to having produced an accurate outline press [EXIT] end chose [L] for Layout to get you back to the Layout screen. Here, unfortunately, you will learn how far from the truth you are!

You get a complete view of picture in the layout screen and et last you can see how all the pieces fit together. This will usually show glaring inaccuracies. Again, compare it with the original picture es this will give you a far better idea of where you are going wrong.

Once you have defined the problems, press [D] for Design end move the box to the area you want to alter and try again. You may have keep flip back to the Layout screen several times before you are convinced that you have got it right.

However, there is no need to become over concerned about achieving a truly faultless result. Complete perfection is probably impossible, given the tools with which you are working.

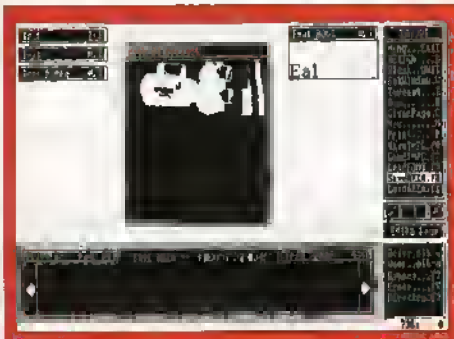
9 Now it's time to get down to the finer details. One major problem here was that the reflected light that defined the shape of the pump had been lost. It is possible to replace this using the spray paint option.

Don't worry too much if the white seems too glaring. You can tone it down later by clicking on the black box and carefully spraying over the area in black.

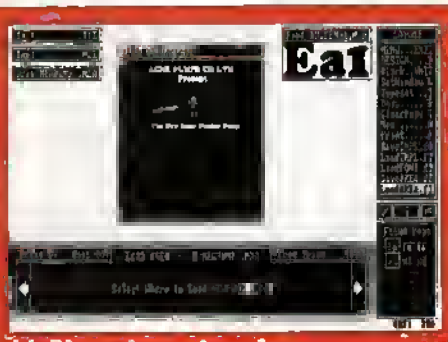
Finally, you can try your hand at improving detail with the Zoom function. Press [Z] and move the box over the area you want. Here you are working in a confined erea, with individual pixels. it is quite an art but if you can master it, it can be really effective.

Micro Design 2 gives you an indication of what changes you have made in small boxes at the side of the screen. These can be very helpful.

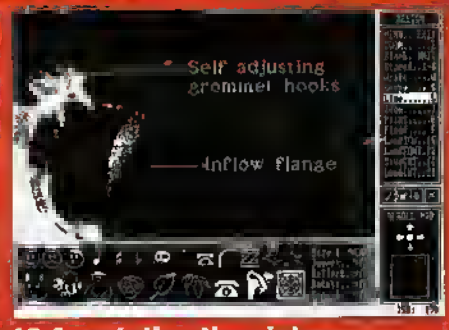
However don't try too much. it is best to use the Zoom facility for small repair jobs rether than trying to tackle complete re-drawing.



10 Cropping the picture



11 Choosing a typeface



12 Annotating the picture

10 When you are reasonably pleased with your picture, save it. This is carried out in the Layout screen ([EXIT] and [L]) using [F2], SaveAREA.

This is where the art of cropping comes in. You can adjust the SaveAREA box to create the right shape of picture – click on the right hand mouse button then move the cursor to the top right and bottom left corner in turn. You can also cut away eny background gunge that you could be bothered to paint out with the peint brush.

The program will suggest that you use the same file name as the file from the scanner but you would be best to choose another one. Something dreadful might still happen and you may want to go back to the original scanned file. Just Back Delete, write in a new file name and press [RETURN].Once you have the new file on disc, pick [C] for ClearPage.

11 Then you can start filling in the text for your mailshot flier. Unless you heve e lot of text it is best to use the 'Write' function in the Design screen where you can place everything accurately.

This is the sort of thing that calls for a sensible, clearly identifiable type face, so this time, we chose BOLDEN33.MDF from the Extre Fonts Disc 2.

You will often find that a picture, like the one we have here, that has taken a lot of improvement, will look better at half size. Any little mistakes that you have made during the course of your improvements will not seem half so bad in the smaller size.

So when you want to load the picture file flip back to the Layout screen ([EXIT] end [L]) and choose [f1] for LoadAREA. Click on the x1/2 icon in the EXTRA keys area and place the smaller AREA box in the correct position.

12 However, as said before, you can use this new file for many purposes. Where Micro Design 2 can be particularly useful is to produce the annotated illustrations that explain what all the interesting features are.

In the Design screen ([EXIT] and [D]) choose the 'Write' function. Find a suitable clear area nearby the feature you want to name and write the details in. You cen write on the image itself as Micro Design reverses the colours of the Ink so it will appear es white on a black surface.

Press [L] for Line and draw in a line connecting the writing with the feature. Move the cursor to the correct spot and click the left-hand mouse button. This will set one end of the line. Click the right-hand mouse button and adjust the other end of the line. it is best to keep the lines horizontal or vertical as this will avoid any problems with stepping.

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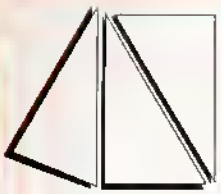

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The Good Club & Training Guide

With such a variety of software for the PCW currently on the market, learning how to get the best out of your machine can often seem to be a daunting trek through poorly-written manuals and stodgy jargon.

For the would-be LocoScript, CP/M or BASIC expert, a PCW User Club can provide an ideal source of knowledge. An informal atmosphere can be very productive – and there's no better way to learn than with the one-to-one help of an expert.

Alternatively, you could recruit the aid of such an expert to your home, or attend specialised courses part-time in colleges and schools.

Below is a selection of clubs and training organisations which can offer such help. Why not make contact; it could be an inexpensive, effective way to a better understanding of what your PCW can do for you.

Clubs

York Amstrad Computer Club
Enterprise Social Club, 17 Nunnery Lane, York (address for meetings only)
Enquiries: **Simon Williams 0906 40164**

Scotwest.PCW
19, Porton Place, Old Greenock Road, Bishopton, Scotland
Enquiries: **Iain Lang 0505 863916**

Ground Floor User Group
Holme Street, Hebden Bridge
West Yorkshire
Enquiries: **Jae Campbell 0422 844991**

Retford PCW User Group
14 Machin Close, Tuxford, Nr Newark
Nottinghamshire NG22 0JZ
Enquiries: **Paul Tew 0777 870038**

CP/M and MS DOS User's Group
43 Birkbeck Road, Wimbledon, London SW19 8NZ
Enquiries: **David Nesbitt 081 543 0824**

Hampshire PCW User's Group
Unit 5, Cable Street, Northam, Southampton, Hampshire
(address for meetings only)
Enquiries: **Paul Day** (above address)

Hereford Computer Club
18 Church Street, Hereford
Herefordshire HR1 2LR
Enquiries: **David Rose 0432 267213**

Teesside Amstrad User Group
8 Knayton Grove, Greenvale, Stockton-on-Tees, Cleveland
TS19 7RW
Enquiries: **Gladys Baker 0642 580018**

M25 User Group
58 Islip Gardens, Northolt
Middlesex UB5 5BY
Enquiries: **Tony Brown 081 841 3666**

Littlemore Amstrad PCW User Group Peers School (Adult Education Centre), Littlemore, Oxford
Enquiries: **R G Hughes 0865 242720**

The Worldwide Amstrad Computer Club (WACC1)
9 South Close Twickenham TW2 5JE
Enquiries: **Steve Williams** (see above)

Training

Banna Word Processing
29 New Bond Street, London W1Y 9HD
Subjects: Loco 1&2, SuperCalc,
Enquiries: **071 493 3336**

Computer Training Centres UK Ltd
Exchange Buildings, Upper Hinton Road, Bournemouth BH1 2HH
Enquiries:**0202 299676**

Dynamic Sales and Training
47 Goldsworth Road, Woking, Surrey
Subjects: LocoScript 1 & 2, dBase, dBase II, SuperCalc 2
Enquiries: **0483 756914**

Headline Communication Ltd
PO Box 22, Hereford HR4 8UW
Subjects: LocoScript 1 & 2, CP/M, dBase II, SuperCalc 2
Enquiries: **0432 271598**

Horsham Office Skills Training
Unit 2, 24 London Road, Horsham, West Sussex RH12 1AY
Subjects: LocoScript 1 & 2, Wordstar
Enquiries: **0403 211440**

John S Blandford
15 St Albans Road, Sandridge, St Albans, Herts AL4 9LA
Subjects: LocoScript 1 & 2, LocoMail, Mallard BASIC
Enquiries: **0727 59913**

Linkom Training
32 Hill Street, Totterdown, Bristol
Subjects: LocoScript 1 & 2, Sage Accounts
Enquiries: **0270 717435**

No Hassle Computing
36 Tantallon Road, Balham, London SW12 8DG
Subjects: LocoScript 1 & 2, Supercalc, Cracker, Masterfile 8000
Enquiries: **081 675 3139**

Molesley Education
Flat 3, 10, Matham Road, East Molesley
Subjects: LocoScript 1 & 2, Loco PC
Enquiries: **081 941 1364**

Office International
247-257 Euston Road, London NW1 2HY
Subjects: LocoScript 1 & 2, Cardbox, NewWord, Supercalc 2, Sage Accounts, LocoMail
Enquiries: **071 387 9339**

Off the Shelf Training Services
5a West Street, Bognor Regis, West Sussex, PO21 1UB
Subjects: LocoScript 1 & 2, LocoMail
Enquiries: **0243 827778**

Rodesign
195 Milwards, Harlow, Essex CM19 4SI
Subjects: Micro Design, ProScan
Enquiries: **0279 444313**

Victoria College
13 Dalton Square, Lancaster, LA1 1PL
Subjects: Loco 1&2, Supercalc, dBase, WordStar, Sage Accounts, Stop Press
Enquiries: **0524 33996**

Wetherby Office Training
Cambridge House, 39 Cambridge St., Wellingborough, Northants NN8 1DW
Subjects: Loco 1&2, dBase, Supercalc 2
Enquiries: **0933 222400**

Wetherby Price Training
30 New Canal, Salisbury, Wiltshire
Subjects: LocoScript 1 & 2, CP/M, Sage Accounts
Enquiries: **0722 24005**

Stop Press!

Three more training organisations have recently come to our attention. They are as follows:

Fields Easy Computer Training
16, Moyclare Park
Baldoyle, Dublin 13
Ireland
Subjects: Loco 2, Loco PC, Micro Design, Sage Accounts, Money Manager
Contact: 088 561291

Westwind Computer Education Centre,
13b Church Street,
Wellington, Telford
Subjects: Loco 2, LocoMail, Protext, Supercalc 2, Masterfile, dBase 2
Contact: 0952 56573

Electric Words
232 Arbroath Road
Dundee DD4 7SB
Subjects: Loco 1&2, Loco PC
Contact: 0382 462640

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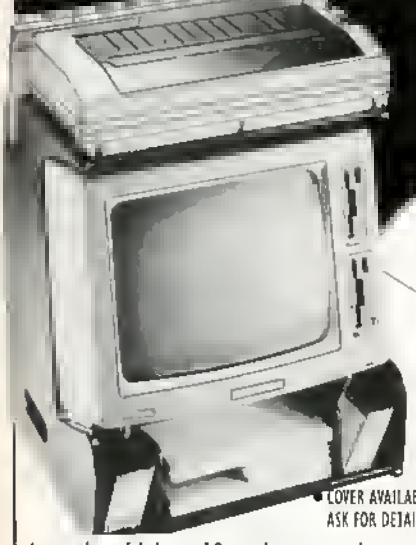

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Others	
Iansyst Crash Course	18.95
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Crash Course is aimed at the novice typist, and teaches 'correct' typing from the outset. Two Fingers is for more experienced keyboard users, and gradually weans you into using all of your fingers on the right keys!

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PRINTERS

All of the following printers are supplied with the necessary cable for your 9512. If you have an 8256 or 8512 you will need a suitable interface, such as the SCA Professional at £49.95. A suitable cable will then be supplied to fit this.
We are happy to give our advice on printers. Please call the number shown below during normal office hours.

9 Pin Printers	
PANASONIC KXP - 1081	159.95
STAR LC-10 Mark One	169.95
STAR LC-10 Mark Two	189.95
STAR LC200	219.95
24 Pin Printers	
STAR LC24-200	269.95
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Jack of all Trades

It's fast, it can handle extra wide documents, and it can even print in glorious technicolour. Alec Rae puts the Citizen Swift 24x through some gruelling paces

Citizen Swift 24x
£489 ● Citizen UK
0895 72621

True PCW owners have always believed that their computers could do anything (within reason, of course). And, to a certain extent, they are right. If there has been a limitation it has always been the printer.

The 9-pin dot matrix on the 8000 series could never produce the text quality needed for serious business use and the 9512 daisywheel couldn't produce the graphics. Now, for the PCW owner with nearly £500 to spend, the problem is solved.

Citizen have just brought out the new Swift 24x, a 24-pin dot matrix machine that seems to cater for everything from handling A3 paper to colour – yes, colour – printing.

Having said that, you do really need to be looking for everything. The 'x' in the title stands for extra wide (the boys at Citizen never were very good at spelling) and the main 'xtra' is the wide carriage allowing you the ability to print 136 columns wide.

This is certainly big enough for most jobs. It easily handles A3 paper or A4 turned sideways. This means you can handle the spreadsheet that always seems to be two columns bigger than the printer can take and that you could produce some interesting effects with a word processor.

Apart from that, it is almost exactly the same as the Swift 24, a clever piece of kit that seems to have packed everything else you would want from a 24-pin printer for a mere £420.

So unless you are a serious spreadsheet user (or, more particularly, unless you are a spreadsheet user who is prepared to spend £120 rather than stick the various parts of your spreadsheet together with Sellotape) this machine might be a case of over-kill.

Serious commitment

Even buying the standard 80 column carriage Swift 24 would seem to suggest a serious commitment to the process of printing. For instance, it has no less than five fonts built in. And for another £40 you can buy font cards that will allow you to use a fifth font of your choice.

As the average person doesn't know whether the type face they are looking at is Times Roman or Condensed Gothic, wanting this variety of fonts would seem to suggest that you have a pretty sophisticated application for the machine. Most people would be happy to have this choice of fonts in a Desk Top Publishing package but as DTP in the PCW normally won't allow you to use printer fonts you will probably find that this is not an option.

However for word processing or any other text-based activity, the choice of in-built fonts available is pretty comprehensive. These include Times Roman and Helvetica (or Sans Serif as they like to call it), the two most popular newspaper type faces, Courier, the archetypal typewriter face and the more distinctive Prestige. This is as well as a readable Draft face for when you are in a hurry.

Add to this a choice of six different pitches from 10 to 20 characters per inch and proportional spacing and you are definitely spoilt for choice. It is certainly true that if you learn to handle the printer properly you can achieve many of the effects of the text handling side of desk top publishing, to a much higher standard, using a standard word processor.

And, of course, the 24-pin printing naturally gives a far better quality of print than a 9-pin can, especially the rarely old nine-pin bundled with the 8000 series (see box). This means that you can do your word processing on a battered old PCW and no-one will be able to guess from the output.

This is on top of a natural speed that

Optional extras

The price quoted for the Swift 24x is a 'base' figure. It excludes VAT, and of course, if you want to invest in the optional colour kit as well, then the grand total will come to just over £600. Sounds pricey, but the Swift 24x has absolutely everything – and probably more besides – that you will ever need in a printer!

Time Trials Chart

Based on a 1000 word piece of text

Swift 24x		
Draft		**58 seconds**
Letter Quality	**2 minutes**	**2 seconds**
Quiet Mode	**4 minutes**	**35 seconds**
PCW 8000 series		
Draft	**1 minute**	**47 seconds**
Letter Quality	**7 minutes**	**15 seconds**

quite leaves the poor old PCW printer standing. Citizen claim a speed of 192 characters per second in draft font and 64 characters per second in letter quality. This is, obviously, under ideal conditions. But our time trials, based on a standard 1000 word piece of text showed that the Swift is nearly twice as fast in draft (and the Swift draft is much more readable than the PCW one) and more than three times faster at letter quality standard.

Shhh... We're printing

But the choices don't end there. You can opt for Quiet Mode, a setting that reduces the speed of printing but actually significantly cuts the noise generated by printing.

Citizen's documentation proudly claims that Quiet Mode cuts noise from 51 decibels to 49 decibels. Using the 8000I Plus scientific testing method we can safely say it did sound quite a lot quieter. In our speed tests (see chart) it is obvious that Quiet Mode did slow the printer down significantly. But it was still noticeably faster than letter quality print on the PCW8000 series native dot matrix printer.

Quiet Mode is a pretty obvious condition to define, but what about text and graphic direction? The machine allows you to decide whether it should print 'uni-directionally' (always printing from left to right) or 'bi-directionally' (swiping back and forward like windscreen wipers).

Using uni-directional printing is supposed to make the lining up of printing more accurate. Incidentally, the one problem we discovered with the Swift 24x was that it got confused with lining up text when there was a variety of pitches used.

Or how about software lock? Often programs will insist on printing to their own settings and will override options chosen on the printer control pad. Software lock allows you to ignore any print settings that come from the computer. How have you lived without it up to now?

Add to these every page setting ➤

Using the keypad

Power/Error lights – will come on to indicate either condition
Online – tells the printer to receive data
Park/Load – Allows you to switch between single sheets and continuous paper
LF/FF/Quick – Line Feed/Form Feed/ – allows automatic paper feed with printer off-line. Quick - halts printing and make changes to print specifications
Select – Fixes a setting
Load macro – see p48
Save – many functions – used in conjunction with menu allows 'quiet mode'
Menu – shows all settings

The fifteen pin advantage

If you've ever wondered what the difference is between a 9-pin and a 24-pin printer, the first and most obvious point is that one has nine pins and the other has 24.

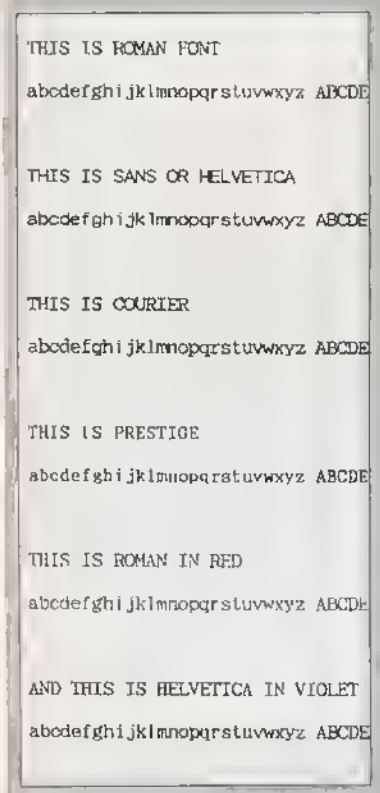
And what difference does that make to your printing? Well you know that the letters or pictures you see on your PCW screen are made up of pixels, tiny points of light. If a pixel is on you see a green dot, if it's off you see black. Each letter on the screen is made up on a grid eight pixels wide by eight deep. The computer dictates which pixels to switch on or off.

In the same way, when it comes to printing the computer builds up each letter or picture by a series of dots on the paper.

A dot matrix printer works by battering ink-laden 'pins' against the paper. The computer decides which pins should be pushed out and which ones should stay retracted, making the shape of the letters or the picture on the page.

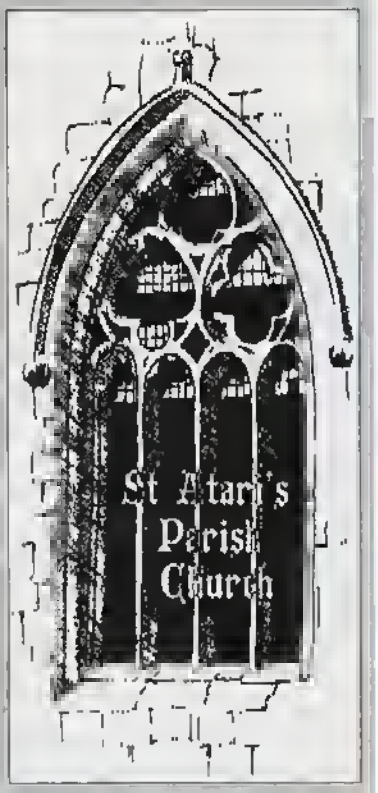
A nine-pin printer, rather predictably, has a row of nine pins for this purpose. The 24 pin printer, however, has two rows of 12 pins dedicated to the same task.

As the pins are closer together you get a far more clearly defined image and possibly more detail in graphics. But you also get better defined letters in text, cutting out much of the stepping seen in print from nine-pin printers, especially in the larger sizes of text. This gives a finished product much closer to the output from a daisy-wheel or even a laser printer and certainly good enough quality for business use.



The Swift 24x has a wide variety of fonts

There were problems lining up the text when different pitches were used.



Graphics are enhanced on the 24 pin printer. This is from Micro Design 2.

Sales force

The Swift 24 – the model that the new machine is based on – has achieved total sales of 100,000 since the machine was launched in Autumn 1990 making it probably the best selling printer in Europe. The success of the machine is partly attributable to a revival in the popularity of 24-pin machines, which, in the UK alone, represent 38% of all printers sold. So confident are Citizen in the quality and longevity of their products, that all printers come with a two year warranty on all parts and labour – including the printhead.

	1988	1989	1990	1991	1992	1993	1994	1995
Big Fancy Car	13,245.00	2,760.00	2,760.00	7,000.00	690.00	7,000.00		2,070.00
Eating out	7,456.00	6,850.00	6,850.00					
Drinks	17,233.00	21,900.00	21,900.00		3,425.00			15,750.00
Executive Toys	3,400.00	3,424.00	3,424.00	2,500.00	1,370.00	2,500.00		
Office Furniture	15,000.00	6,845.00	6,845.00	5,000.00	2,053.00	5,000.00		2,053.00
Raw Materials	10,000.00	6,850.00	6,850.00	5,000.00	6,745.00	5,000.00	6,300.00	5,125.00
Production Costs	5,000.00			5,000.00		5,000.00		
Wages	45.50	75.35	63.90	4,000.00		4,000.00		
Other things	1,000.00	4,039.00	4,039.00	5,000.00		5,000.00		
	72,379.50	52,743.35	52,731.90	33,500.00	14,283.00	33,500.00	6,300.00	24,998.00

Extra wide spreadsheets are suddenly easy to print as whole with the Swift 24x and its 136 column carriage. No more sticking the various parts together with tape!

imaginable, choosing character sets, the ability to install a colour kit and an automatic sheet feeder and you could find yourself playing a game of 20 questions with the printer just to print out a letter.

Now it is very pleasant to have all these choices available but, unless you are a bit of a PCW whizzkid, you may have to get down to some hard work, if you do want to get your money's worth from the machine.

With a cheaper 24-pin printer, such as Citizen's own £320 'entry level' 24-pin – the 124D – you can virtually just plug it in to the PCW and get on with it.

To get the best from a sophisticated machine like the Swift, you will want to have, or at least to acquire, a reasonable knowledge of the process of printing from a PCW – and you may have to look carefully at what software you use to achieve the full potential.

Pick a font... any font

The almost bewildering variety of settings can all be changed from the printer control pad. There are six buttons and a small LCD display. By pressing the Menu button you are presented with each possible setting in turn. Find the setting you want, and by pressing the Select button you are presented with each option, one after another. You pick the correct option

For example, you press the Menu button until you come to PRN STYL. PITCH (dyslexia is a cruel affliction) and then press 'Select' until you get 15 CPI (characters per inch). In fact the most time consuming aspect of the machine is flicking through all the options on the LCD.

The impressionists

Many of the functions you may never need to touch. For instance, there is a choice of emulations. An emulation is the way one computer will pretend to be another computer. The PCW printer emulates (or pretends to be) an Epson printer. So, any printer with an Epson emulation can be run from a PCW.

If you decide, some day, to turn traitor and buy another computer, you may need to use the IBM or the NEC emulations on offer. Otherwise you just stick to the Epson emulation and most software will run without a problem.

But there are features that you will certainly want to use regularly. Setting different fonts and pitches or changing colours (if you have the optional colour kit fitted, of course), are all operations you will want to perform on a regular basis, and with the minimum of hassle.

One major plus point for the Swift is its system of macros. In simple terms, a macro allows you to carry out a number of regularly-used operations with one command. The Profile.Sub, used by many PCW users to set the defaults on their machines when they start up is a type of macro.

With the Citizen you are allowed four different macros, meaning that you can set up the printer to four completely different settings. A macro with your default settings loads automatically every time you start up. But if you want to change you simply load another macro, again using the control panel.

Quick change artists

If you are particularly quick witted and enthusiastic it is even possible to change the colour, font, pitch or even load a new macro during printing. By pressing the Quick Button at the precise moment that the printer is at the place where you want to make the change, you can pause the printing. Then you can ring the changes by picking your options from the buttons, suitably labelled Colour, Pitch, Font and Macro.

Protext's way

If you are thinking of investing in the Swift 24x and you want to get hold of a copy of Protext (for the reasons explained in The Great Escape box opposite), contact its manufacturers, Arnor, on (07331) 68909. Protext costs £59.95, and is the subject of a regular monthly tutorial series in 8000 Plus!

All the colours of the rainbow?

If you purchase the optional colour kit, your Swift 24x will come adorned with this ribbon as an extra. Use it to mix, match and create new shades

It has to be admitted that the PCW has never been well known for its colourful nature. Green and black has always been its favourite colours when it comes to screens, and black has always been predominant when it comes to printing.

So to hear that the Swift 24x can be fitted with a colour kit is liable to fill the traditionalist with suspicion. This is an optional extra available in both the Swift 24 and the Swift 24x for around £45.

The fact is that the colour kit is a spectacularly simple concept and one that could well prove valuable to anyone wanting to brighten up their literature. It is based on a simple attachment that can vary the height of the printer ribbon. This can be fitted by even the simplest of 8000 Plus reviewers in minutes using only his work-soiled hands and his native cunning, so it should be no problem to an 8000 Plus reader.

The ribbon looks something like a deck-chair, with black, blue, red and yellow stripes. Vary the height of the ribbon and the print head strikes through a different colour on the ribbon.

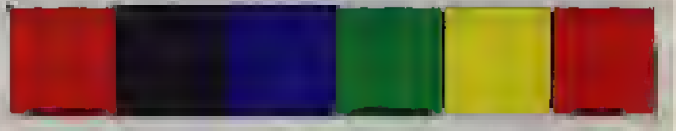
And, of course, as every 'O' level Art student knows, by mixing the basic colours you can achieve a much wider variety of hue. By double striking with two different colours the printer can successfully supply purple (red and blue), orange (red and yellow) and green (blue and yellow).

Having said that, you still have the problem of what to use this wonderful new gadget with. As far as we know there is no software that would allow you to print out any form of graphics in colour and even printing text in the rainbow shades has a few problems.

Anyone with a good working knowledge of BASIC could probably knock up something but it is probably not the first thing you would attempt in the language.

If you simply want to print a letter in purple instead of boring old black that is not too much hassle. You can change to any of the seven options on the printer control panel in seconds.

But you will want to do use the colour changes inside software like a word processor and even a spreadsheet. Just think how useful it would be for figures 'in the red'. To do this you would need to understand the mysteries of escape codes and you may need to buy a different program. Turn now to the Great Escape box for an immediate insight.



This is the range of colours which can be yours with the standard colour kit

The Great Escape

When it comes to controlling a printer, the advantage of using a program like Protext is that it allows you to send control codes direct to the printer while you are in the program. These are a string of letters that the printer recognises as an instruction to alter a setting. Protext works on a series of embedded codes which are set in the text. Just type in [ALT][X] and [B] at the correct spot and the print will instantly change to bold at that point.

These are no more than a form of control code. When you enter the code for bold, what the computer actually sends are the numbers 27 and 69. These ere ASCII code numbers, the standard code that allows computers to talk to each other.

27 is the number for 'Escape', a signal not to print the next letter but to accept it as a control code. The 69 is the ASCII code for the letter E which sets the printer up for bold.

So when you see an instruction in a printer manual to change a setting using the code 'ESC r {n}', for instance, this is an escape code. This, in fact, is the code used by the Swift 24x to change the colour.

The ESC, as we know, is the number 27 but we have to work out what the ASCII code for the letter r is. The simple way to work it out is to go into BASIC and type ?ASC(r), or, as we say in English, "Print out the ASCII value of the letter 'r'".

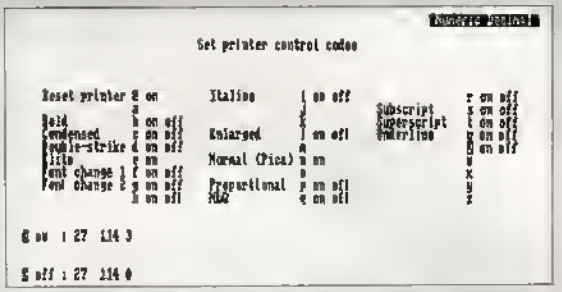
If you would rather do a bit of mental arithmetic you can work it out if you know that the letter 'A' is ASCII code 65, 'B' is 66 and so on until you get to 'Z' at 90. Then you skip a few obscure symbols and start again at 97 for the letter 'a'. Either way you will discover that the ASCII code for 'r' is 115. This means "prepare to change colour".

The {n} is another number given to denote what colour has been chosen. In this case black is 0, red is 1, violet is 3 and so on.

Protext has an ingenious section called SETPRINT.COM which is ideal for this kind of work. Just type SETPRINT in command mode and it will appear.

By pressing '3' you get into the 'Set Printer Control Codes' section. This shows you all the printer codes that have already been set. Using the cursor keys position the cursor on the letter b and you will see the numbers 27 69 already mentioned.

So to set up the printer to change the text to violet, look for a suitable spare letter. In this case 'v' would seem supremely sensible. Move the cursor to 'v', press [RETURN] and type in 27 115 3 (or as it is translated ESC r 3) where it seys 'on'. Move to the 'off' section and type in 27 115 0 and the next time you use the code the colour will be changed back to black.



Using SETPRINT.COM in Protext you can create your own, customised printer control codes.

This means that when using Protext you can type [ALT],[X] and [V] at the appropriate point and any text after that will be printed in violet.

Font changes can be achieved in the same way with the code ESC k {n}. So to change to Helvetica would require the code 27 107 1 and you would use 27 107 0 to turn it back to Times Roman. Again if the letter 'h' is free is it an ideal one for changing to Helvetica.

In this way you can built up a wide choice of codes, one for each available letter to set virtually every aspect of your printer controls.

Before you leave SETPRINT go into section 1 'Set Printer Options'. With the cursor on the section that says 'internal', press one of the sideways cursor keys and the program will flip through the options. Stop when you see 'parallel' as this will send all the data for printing direct to the parallel (or centronics) interface (and therefore to your new printer, instead of to the internal printer (see Parallel Universe box).

When you have [EXIT]ed from here press 7 (for 'Save Printer Driver') and choose a suitable name – say SWIFT. Then when you want to use the new printer in Protext just type in 'printer Swift' and all the new printer codes will be made available to you automatically.

Special effects

The range of 'special' effects offered by the Swift 24x is quite astounding. The manual boasts a selection of over 200 varieties of print styles. The more common among them, such as double strike, italics, underline, sub and superscript can all be combined with the print width and print density features to vary the styles even more. The printer also allows you to produce reverse print, although this cannot be enhanced further by the method described above.

This is, of course, the most time consuming, nerve-wracking and thankless tasks ever thought of. Far better to learn how to use the computer properly and work with control codes (or escape codes, as they are known to their friends).

Certainly most users will probably want to use different colours and/or fonts in the same piece of text and perhaps even in the same line without the hassle of hanging over the printer, finger poised.

BASIC solution

As always with printers, this is not a major problem using BASIC. However, not everyone has the knowledge or the desire to dabble in the mysteries of LPRINT and CHR$. But if you want to mix and match during the course of a word processing document you may find it difficult unless you happen to have a copy of a word processor like Protext that allows you to define your own printer control codes.

The Swift 24x does work with LocoScript 2 quite easily for all normal functions, but there does not seem to be an easy way in LocoScript to take advantage of all the features. For more details, see 'The Great Escape' above. One aspect well covered by Citizen is paper handling. The machine offers what the makers quite accurately describe as 'a comprehensive paper handling package'.

Continuous or single sheets can be fed from the rear or the top of the printer using friction feed (push or pull) or by an automatic sheetfeeder. Using an optional printer stand means that continuous paper can also be fed in from the bottom.

You can have continuous and single paper loaded at the same time (you choose which one to use) and there is a short tear off/scroll function (to tear continuous paper at a tear off bar).

It has an in built paper tractor and a helpful manual sheetfeeder, which ensures that the paper always drops into the machine at the correct position and at the correct angle.

If you can work out how to use it properly you must be able to find a paper handling system you like. But as said before this may take more work than you think.

The Swift 24x is a PCW explorers' paradise – but perhaps not a must for the modest demands of everyday usage. ●

Parallel Universe

When it comes to buying a printer you also need to take into account the cost of an RS232 – the box that fits on the expansion point on the back of your PCW . This costs about £50. You also need a parallel printer cable, which will set you back about £10.

Be careful when choosing your printer cable that it has a male parallel or Centronic fitting at both ends. Most printer cables in computer shops are for IBM compatible PCs and are not suitable for use with the PCW.

To divert your printing to the RS232 you need the utility DEVICE.COM (on the CP/M utilities disc). With the disc in the drive type DEVICE LST=CEN (short for Centronics). This works with most programs, although with some, including LocoScript, Protext and MicroDesign, you need to choose the Parallel port as an option in the software.

Citizen Swift 24x

Pluses

- ▲ It has every feature you would possibly want from a 24-pin printer and more.
- ▲ Excellent variety of fonts.
- ▲ Good quality output at top speed.

Minuses

- ▼ The cost means that it will only be of interest to a limited few.
- ▼ Not easy to get to grips with.
- ▼ You may need to buy different software to get full advantage of all the features.

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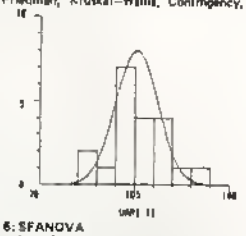

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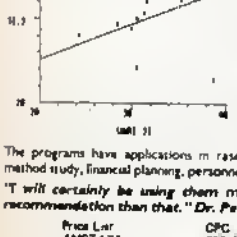

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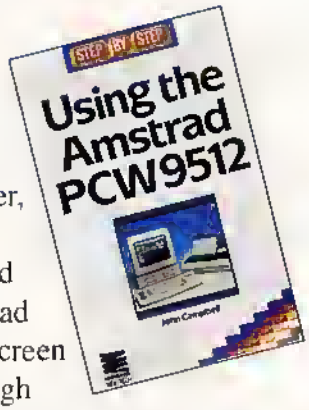

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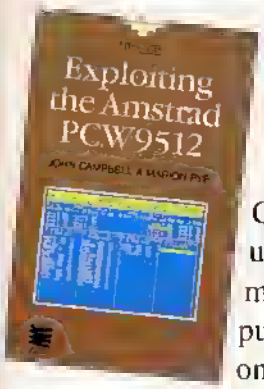

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Data Basics

A database could be the perfect solution to all of your administrative headaches. In the first of a new series of Beginners' Guides, Tim Smith looks at the user-friendly Datastore II, and finds out just how such a database could help you

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You may have heard the term 'database' bandied around from time to time, and you could well have seen one in action and not even realised it; when booking a theatre, train or 'plane ticket, the software which the booking clerks use are all some form of database. But what exactly are they on a human scale?

Well, a database is in effect a glorified, electronic list or set of linked lists. A good database program, and Digita International's Datastore certainly is that, will allow you to store large amounts of related information quickly and without fuss. It will also allow you to retrieve this information both on screen and in printed form.

Ideally, the database of your choice should be able to be tailored to your needs. This appears to be a bald and obvious statement, but there are so many of them on the computer market – mainly because a basic unit is fairly simple to program – that you could end up choosing one which would make the pen and paper seem like luxury, rather than slow, old fashioned hard labour.

Datastore, from Digita International, is an excellent example of the genre. It is well suited for the beginner, with its excellent and comprehensive manual.

All the database 'regulars' are there: you can set up your own system from scratch and get it to look and feel just as you need it. You are provided with a wide range of printing options. It even makes certain for you that files are saved and that you know exactly how much information you have at your fingertips.

From the base up

Before we go any further it might be an idea to become acquainted with some database terminology (see the box on the next page). You will see that we have made an analogy to a conventional card index box.

Once the basic concepts of record, file and field are grasped we can see how your PCW can really go beyond the old fashioned restraints of card and pen. A computer database doesn't just let you enter information, it makes sure you do it correctly - and then it allows you to access and manipulate that data with the minimum of fuss and a maximum of speed.

With a system such as Datastore you have to set up the way you want your files to look and the way in which information will be stored – just like you would on each card of a well-organised card index box.

Don't be put off when it comes to arranging how you wish each of your Datastore records (or index box cards) to look – the manual takes you through the first steps with a tutorial. Basically though, you are presented with a blank screen and then are asked what you would like to call Field 1. With the card box system this first piece of information would usually be something like a surname – so that you could store the cards in alphabetical order. With the computer you can make this first field whatever you wish as long as it is not numerical; after all the PCW and Datastore are going to do all the hard work for you.

You are asked whereabouts on the screen, and later on the printed page, you would like that field to be placed. You are then asked how long the piece of information which goes into this field is going to be – this can be very useful if, for example you are storing data relating to cheques or order numbers which have reference codes of a certain length. Once all the data is entered, and the record looks just as you want it to, you can forget about it as it works in the background. Now it's time to enter the information itself.

Define your thinking

Another way in which the database-equipped PCW takes over from the card box method is that information (fields) on each record is actually active; it is not 'static' on the page as it would be using pen and paper. During the set up procedure you can define each field one of the following ways.

Character: *This basically means text, names, or even figures such as phone numbers which you do not want calculated.*
Date: *This is an automatic method by which you enter the date in* ➤

Native instinct

Just a little hint to the wise. Datastore, unlike many programs, has been designed specifically to work with the PCW. It has not been 'ported over' from the world of IBM compatibles. This means that your printer, whether your PCW is a 9512 or 8256/8512 is catered for. The installation process (which is carried out in a few simple steps) deals with all this for you. Datastore also makes use of the PCW's RAM (Random Access Memory) - or the M: drive. This means that constant disc swapping and consequent wear on the drive(s) is cut down. It also means that searching and retrieval of records is speeded up. Digita says that the average 'find' speed is 4 seconds - and we won't disagree.

The opening screen from Datastore. Notice especially option 9, which makes sure that all the information you have painstakingly entered is saved at the end of every day's working time

Setting up a record. This process is well documented with each field (piece of information) of each record (or card of a card index box) being defined in type and position by you

A completed record. But something is wrong. One of the fields is misplaced, and will spoil the appearance of the whole record when it is printed out. This can easily be changed using the arrow keys...

Database Terminology Made Simple

Databases are useful programs but like most things in computing they seem to be laden down with rather confusing jargon. So, in order for you to get started quickly and confidently here is the 8000 Plus jargon busting guide to those terms.

A simple database is very similar to an old fashioned card index box - although it is best not to get too carried away with this analogy as you might get used to under-using your computer by treating it in this way. For now however, we will use this image to work with.

The similarities between the two are as follows. With a card index box you have, obviously, cards. With a database the plastic card index box is known as the 'file' and these cards are known as 'records'. Unlike the index box method, which corralled you into one system of indexing per box, the computer allows each 'file' to be indexed in several ways.

With a card index, each of the cards has a number of pieces of information on it. Usually, it has one main piece by which you can order or index the box. For example, in an address list you would store the cards in alphabetical order with last names acting as the indexing pieces of information.

On each separate card you might have the following pieces of information:

Last name (by which you can index the box), first name(s), address (business), address (home), telephone number (business), address (work), position in business, other comments.

Using a card index box, these are just known as 'bits of information' or 'details'. In the computer version, the database, the 'bits of information' in each record are known as 'fields'. The list we have just detailed will be exactly the same but is stored electronically – this means that it can be automatically duplicated and backed-up – yet another boon.

Now, where a computer takes over from the conventional paper and the "Oh dear, I've just spilt coffee all over the cards!" method is in its search capacity. The process of tracking down specific pieces of information is speeded up and expanded in the scope of choice.

Instead of having to store each of the records in your files by the last name first method, you simply fill in the fields and the computer sorts them for you. This would be very much like being able to fill in each card in the box, closing it and then letting it sort them into company name first one day, last name first the next, telephone area code the day after and so on using each piece of information on each card as your indexing method – fairly time-consuming for the old method.

So, imagine that you need to track down the number of the company secretary of Platt and Pearce Ltd but you have forgotten his or her name. With the card index box you would have to sort through each card until you hit on the right one. With a computer and a database program you have the ability to make every field a 'key field' - or, the equivalent of an entry in an index.

With the card index you only have one 'key', which is usually the last name. With a database you can tell the computer to make all the fields key fields. So when you need to find the company secretary you just type in "Company Secretary" or "Platt and Pearce Ltd" or even "Pearce". Your database will go straight to the record (card) you need. If there are several contact names at Platt and Pearce it will allow you to cycle through the files until you come to the correct one.

The main differences between the two systems are as follows:

Card Index Box System	*Database System*
Plastic Box	*File*
Card	*Record*
Piece of information on card	*Field*
Index (last name first)	*Key or Key field*

And there's more...

Datastore is just one example of a database for the PCW, and was selected for the first of our beginners' guides because of its user friendly nature. There are, of course, many more databases on the market; for a look at some of them, turn to our Good Software File on page 75 of this issue.

DD/MM/YY format. This can be extremely useful if you have someone not too familiar with computers entering important information for you. The PCW and Datastore simply will not allow anything but a date to be entered in this field.

Numeric: *This only allows you to enter numbers. One positive point here is that mistypings can be tripped and you never need end up with a number such as 124*8 (the * being the [8] key with the caps lock on and also the multiplication sign for the PCW). More than this though, a numeric field used in a database such as Datastore can be calculated.*

Money: *This field cannot be calculated but does insert commas in the correct place and again will not allow for any typing errors which might lead to embarrassing company reports.*

Not every database includes this kind of 'error-trapping' or data-specific method of defining fields – watch out for them. Again, this is one of the very positive aspects of Datastore.

And finally folks

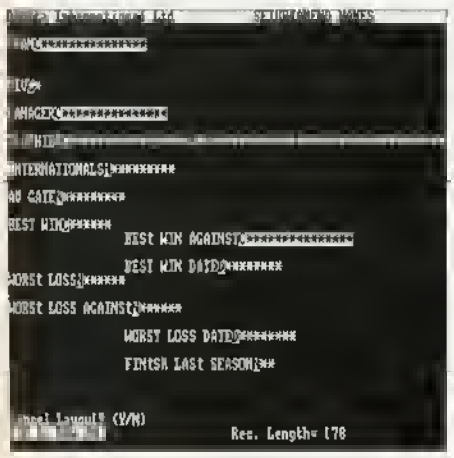
In order not to be confusing we have not gone into the finer details of Datastore or databases in general; suffice to say that setting up the system is simple enough and the options offered are comprehensive. What we have given is the basic overview of what can be a very complex system.

However, the complexity in this case works in your favour and can be built up with your ideas and needs in mind. Datastore, with its excellent manual, flow chart and guide to layout design comes with all that a beginner or practiced user could want in order to produce a useful database system.

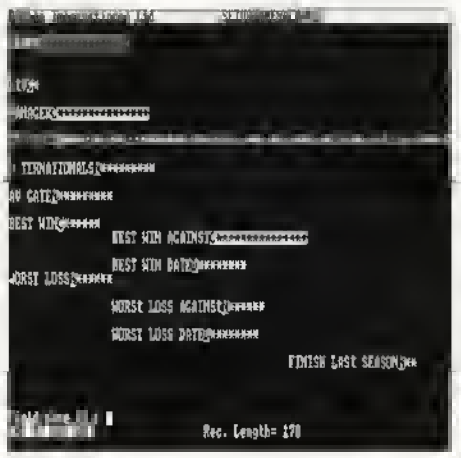
With any piece of software which contains valuable data, you should always be sure to save your files at the end of every working session – and this is probably Datastore's greatest asset for the newcomer. The program will not allow you to quit without doing so. Unless you hit the 'off' switch, that is!

The ability to program function keys, set up printing to your design and even carry out complicated and tedious calculations quickly should make the life of the business person, club secretary a great deal easier.

This month's look at Datastore marks the first in a series of 'application specific' tutorials. If you would like to know more about a specific area of PCW activity, drop us a line; we'll do our best to cover your queries in future editions of our Beginners' Guides. ●



All you have to do is press [EXIT] and change the position of the wrongly laid out field. Remember not to answer 'Y' when you are asked if you want to 'Cancel' the layout otherwise you'll lose the record



All the changes have been made and the record looks OK. This record is ready for printing later on and will produce professional looking information which can be useful in audits or company reports

Just to make things easier you also have the ability to program the F(unction keys). This facility can come into its own when you have regular calculations to carry out

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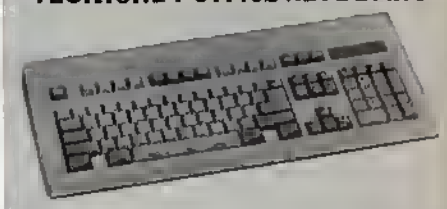

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E & O E

Sporting Triangles

Have you ever wanted to appear in a television sports quiz? Martin Le Poidevin shows you how you can take part in the comfort of your own home

Sporting Triangles
£19.99 CDS Software
0302 321134

It's so easy to be knowledgeable as a TV quiz game viewer. There you sit, pipping the fevered contestant at the post with the correct answer to the starter for ten, just wishing that it was you who could win the humper prize. Well, if you fancy a turn in the hot seat, you're not concerned that points *don't* mean prizes, and sport is your specialist subject – then this is the quiz for you.

CDS Software's 'Sporting Triangles' is very much based on Central Television's programme of the same name. The format is simple: three competitors and three sorts of quiz attack: the Standard Question round, the "Hit for Six" round and to finish off with, the Quick Fire round ("fingers on your buzzers!"). Seven rounds in all. If you are really quick, you could squeeze most of it into the commercial break of the real thing.

One man and his PCW

But what if you can't get two other players and the spouse and kids are fed up of looking like sporting illiterates? No worries – if you can't come up with the opponents yourself, the computer will provide enough to make the number up to three (after all, you can't have a triangle with two corners, can you?). These computer generated sports fans (and they all seem to be men) come in three varieties – perfect, good and average – and they obviously live in a different part of the computer to the main program, because they by no means get all the answers right – especially if they are only Mr Average.

Mind you, if you are playing on your own against two computer people, you will need a great self-restraint to avoid cheating. In order to allow some flexibility in the answering (for instance, so that "soccer" will be marked the same as "football") the game requires that you say your suggested answer out loud, and then reveal the correct answer on the screen. The computer then asks you whether your answer was correct or not. Can you lie to a computer?

The presentation of the game tries hard. The game starts from the CP/M A> prompt, where you type in the word 'disk'. Your first task, once the program has loaded, is to input the number of real players, and their names (you are given the status "human", which is comforting), at which point the computer makes up the numbers by inventing the extra players. So far, so good.

Raising standard questions

Each player now has to choose a special subject (12 sports are on offer). The three subjects chosen, together with a fourth category of "general questions", become the basis of the Standard question rounds. For these rounds the players in turn roll a dice, and move a 'puck' round the triangular board.

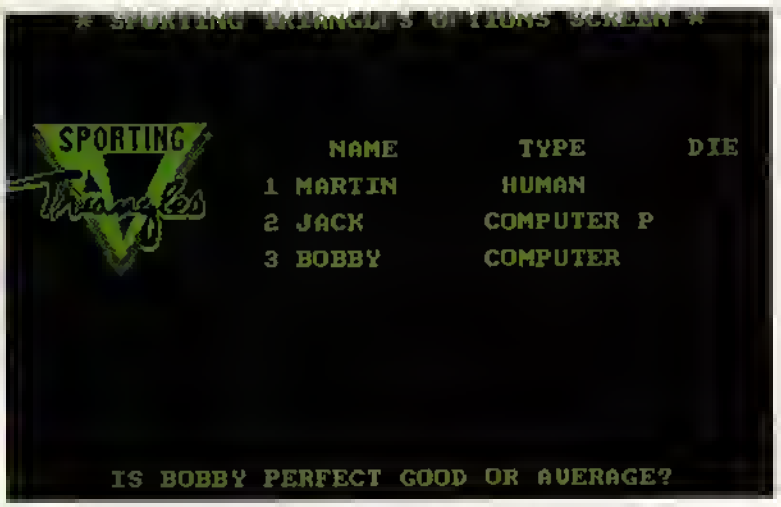
Each 'square' on the board has one of four shadings, corresponding to these four categories, and you are set a question on whichever category you land on that turn. Thus there is only a 25% chance of your selected sport coming up – but that's life on the quiz show circuit.

For each correct answer in the standard round you get 2 points, but you have no chance to "come in" and gain extra points if your opponent has come a cropper. There is a time limit for the "human's" answer which you set at the top of the game, and failing to answer within that time limit is the same as getting it wrong. It is also more infuriating, because if time does run out, the computer never actually tells you what the answer should have been, even if it is one of its own players who was at fault. Highly frustrating.

The place to score big points is the Hit for Six round. Here you are given a series of clues to the identity of a sporting personality. The computer helps by giving you a choice of seven names, one of which is the correct

Calling all sports fans

Somebody at CDS Software is obviously a sports fan. Besides Sporting Triangles, CDS also produce Steve Davis Snooker, Brian Clough's Football Fortunes, Colossus Chess and the Complete Home Entertainment Centre. And jolly good they are, too!



The opening menu in which names are assigned to the three players. You also get the chance to decide just how good the computer-based players are going to be

In the Standard Question round the players take it in turns to move the triangular puck around the board. The subject of the questions depends on where the puck lands

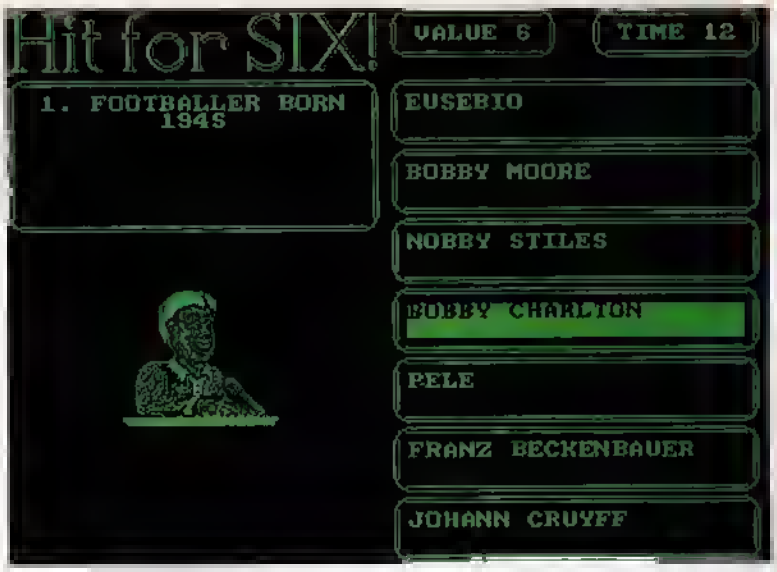
answer. After each clue you select one of these names as a suggestion. If the name is wrong it disappears from the board, and you are given the next clue, so that eventually you have one clue left, and a choice of two names.

The round's scoring reflects this. If you get the correct answer after only one clue, you will get six points; if you take two clues, then a creditable five points will be added to your score. If, however, you are on the losing end of the 50-50 chance when only two names are left, you get to work out what the correct answer is (it is the only name left on the board), but you get no points.

Rapid exchange

The final Quick Fire round – "and remember, this round can change the whole complexion of the game", but is unlikely to if you've amassed two points and the computer is on 20 – is slightly different again. The questions again revolve around the specialist subjects, but now it is a "Free For All", with specified keys on the keyboard becoming buzzers. The first person to press their 'buzzer' gets to answer. If that person is correct, they gain two points, but if they are wrong, they lose a point. ("It's a tough game out there, Harry"). Again, the other players don't get the chance to 'come in' after an incorrect answer, they only get to jeer.

At the conclusion of that (the final) round, our chairperson runs through the final scores, in descending order. A good score (one that a computer-generated 'perfect' person, such as Joe or Seb will get) is around the 18 mark; you or I may get down to as little as five or six, given a bit of luck in Hit for Six, and not too much of a kamikaze tendency in the buzzer round.



The start of the Hit for Six round. Players choose from the list on the right in response to the clues posed by the quiz master

The final Quick Fire round with the players sitting in their booths, wearing the equipment associated with their sport

Once more unto the breach

If you want more, you are invited to go round again. But this time the going is a little more difficult – the special options which you (and the computer) chose first time round are no longer available. How deep is your knowledge of synchronised fly-fishing?

The game obviously attempts to mimic the original TV series. That means visuals, which means graphics. The graphics brighten up the package, no doubt about that, and there is quite a library of them on the disc. But they are far from stunning. The only moving graphics are the puck on the triangular board, and the dice. The rest, such as the chairman, the players and the icons representing the individual sports are "still" snapshots.

The players, by the way, sit in their booths, with their scores displayed on the panel in front of them. They wear the garb associated with their chosen sport – so a cricketer wears a white V-neck jumper, the USA sports expert hides behind his football helmet, the boxer sports his gloves – its worth picking the more obscure sports to see the clothing! Notice that they're all male. Even the computer generated players are all male. Any guesses as to which half of the population the game obviously wants to identify with?

But what about the nub of the game – the questions? Well, these questions are nasty. We don't want to give too much away, but they do delve fairly deeply into your sporting knowledge. Where is it that the Fenner Cup is fought over? What is the name of the "Stayers Classic" run at Wembley over 655 metres? And would you be able to identify the link between four names – when it is that they were beaten by Don Budge in his 1938 Grand Slam year?Is that really general sporting knowledge?

Many of the names given in the Hit for Six rounds also have an unfamiliar ring to them. But be comforted here, even the computer often goes through the whole round without picking the correct name. (Does it really believe that Geoff Boycott played at Wimbledon in 1972, or any year, for that matter?)

And of course there is also the danger that the questions involved are going to become out of date. Only once did this happen in our tests, with the now rather dated teaser – "Where will the 1990 Superbowl be held?" but even then, the essence of the question is still obvious, and the answer is not going to change.

A game for all seasons?

But the question still remains – who is going to want to play the game? Anyone who wants to answer every question with either "Ian Botham" or "Gazza" and still stand a 50% chance of being right is going to be disappointed. It's really not a knowledge of current high-profile (i.e televised) sport that is required, so that youngsters could quickly become put off and bored.

Nor is it the game for someone who wants to pit his brains against the computer in a lively battle of wits – the computer response is far too slow to make lively a possible description of the game.

Sporting Triangles will probably be best appreciated in a huddle – three expert human competitors with a lifetime's knowledge of sporting trivia, and a computer quiz master.

However, if your sporting knowledge is less than extensive, then you may find yourself on the losing side just once too often. ●

Hints & Tips

● If you are playing the game by yourself against the computer, it is possible to make things move a little faster. If you keep pressing the space bar whenever the game seems to have come to a halt (but not while the computer people are rolling the dice or while they are playing the Hit for Six round) you will be passed on to the next screen without the usual delay. But be careful that you don't miss any answers!

Sporting Triangles

Pluses

- ▲ A challenge for the all-round sportsman
- ▲ Three players can participate
- ▲ Amusing graphics

Minuses

- ▼ Tendency to be rather slow

Ease of use	4/5
Challenge	4/5
Presentation	3/5
Addictiveness	3/5
8000 PLUS Value Verdict	14/20

Listings

This month, Martin Le Poidevin looks at two programs with a sporting feel. So, whether you're on the road to Wimbledon or Wembley, this is where you start

TENNIS.BAS by Jason Sharpe

In the good old days when men were men, women were women, and computers were computers, members of the former two categories used to spend hours playing tennis with members of the latter category.

Jason Sharpe's TENNIS.BAS program will take you back to those heady days, with a neat implementation of this classic among classics. At least it's not Space Invaders!

A game of Super-Tennis in progress - with the computer (we call it Steffi) well on the way to another whitewash!

To move your bat (the one at the bottom) use the square bracket keys. Should the ball get past you, the computer gains a point, but if you get it past the computer you get a point. The first one to get to 10 points wins, at which point you have the choice of giving up, or playing again.

There is no 'out' at the side of the court - if the ball hits the side lines, then it will come off at the correct angle. The same applies to a ball hitting either bat, except when your bat is moving. If it is, then you will see the ball coming off at an unexpected angle, hopefully confusing your adversary. This is something to be borne in mind if the game ever gets caught in a rut - it can sometimes happen that the ball is moving vertically up and down between both bats, neither bat having to move. If this is the case, it's up to you to break the deadlock.

The game, then, is very simple. But for the true BASIC enthusiasts among you, there is a lot of scope for adding those little extras that make all difference. For a start, the setting is rather bland - perhaps you could give it a bit more of a feel of Flushing Meadows or Wimbledon.

To help you change other details, it might be worth making a few points about the program itself. The ball position is held in the variables X% and Y%. It is updated by adding the variables XS and YS, which always have the value 1. However, if the ball is going to go out of court, the relevant XS or XY variable has its sign changed - if it was positive it becomes negative, if negative it becomes positive. Thus the direction of the ball is changed, without altering the angle.

The two bats are defined and printed in the sub-routines at 420 and 440. Throughout the listing, variables which refer to the computer are prefixed by A, and those which refer to the player are prefixed by B.

```
10 REM *** SUPER-TENNIS (c) J.SHARPE 1989/1990                    1543
20 REM ********************SET UP************************           0D76
30 CL$=CHR$(27)+"0"+CHR$(27)+"E"+CHR$(27)+"H":PRINT CL$           1265
40 PRINT TAB(39);"SUPER-TENNIS"                                   1023
50 :                                                              00C2
60 TY%=6:BY%=24:LX%=22:RX%=68:REM *** COORDINATES                 161B
70 MBS=2:BAS%=1                                                   06E2
80 DEF FNT$(X,Y)=CHR$(27)+"Y"+CHR$(Y+32)+CHR$(X+32)               1445
90 AX%=0.5*(RX%-LX%)+LX%-2:BX%=AX%:REM **BAT A & B  POSITIONS     19B0
100 X%=LX%+1:Y%=BY%-1:REM                  **BALL POSITION        1212
110 W%=RX%-LX%:AM%=0:BM%=0:AP%=0:BP%=0:XS%=1:YS%=-1               1570
120 FOR Y=TY%+1 TO BY%-2                                          0954
130 PRINT FNT$(LX%-1,Y)CHR$(149)SPACE$(W%+1)CHR$(149):NEXT        189D
140 GOSUB 420:GOSUB 440:GOSUB 470                                 0E3B
```

The variables in line 60 define the court, and MBS in line 70 is the "maximum bat speed". BAS% is the computer's bat speed. The highest this can be is two

```
150 REM ********************GAME*****************************      0C9A
160 PRINT FNT$(X%,Y%)" ":X%=X%+XS%:Y%=Y%+YS%                      11EF
170 IF X%<LX% THEN X%=LX% ELSE IF X%>RX% THEN X%=RX%              18E9
180 PRINT FNT$(X%,Y%)CHR$(188):GOSUB 360                          10D4
190 IF X%>=RX% OR X%<=LX% THEN XS%=-XS%                           137E
200 IF Y%=BY% THEN YS%=-1 :IF ABS(X%-(BX%+3))>1 THEN AP%=AP%+1:
      GOSUB 470 ELSE OUT 248,11:OUT 248,12:XS%=XS%+BM%            2EC7
210 IF Y%=TY% THEN YS%=1 :IF ABS(X%-(AX%+3))>1 THEN BP%=BP%+1:
      GOSUB 470 ELSE OUT 248,11:OUT 248,12:XS%=XS%+AM%            2D7B
220 IF ABS(XS%)>MBS THEN XS%=XS%-(SGN(XS%)):GOTO 220              1723
230 IF AP%=10 OR BP%=10 THEN 290                                  0C19
240 BM%=FRE(""):BM%=0:A$=INKEY$                                   0B6B
```

```
250 IF A$="[" AND BX%>LX%-2 THEN BX%=BX%-2:BM%=-1                    1506
260 IF A$="]" AND BX%<RX%-4 THEN BX%=BX%+2:BM%=1                     1511
270 GOSUB 440:GOTO 160                                               0923
```

Be careful of the lines 200 and 210. These are all one line. Don't press the return key until you have reached BM% and AM% respectively. By the way, the OUT commands in those lines turn on and off the PCW buzzer

```
280 REM ******************END OF GAME**********************           0FDD
290 FOR N=1 TO 400:A$=INKEY$:NEXT:PRINT FNT$(31,15);                 176E
300 IF AP%>BP% THEN PRINT "******* COMPUTER WINS *******" ELSE PRINT "*****
      WELL DONE YOU WIN *****"                                       29D9
310 PRINT FNT$(27,28)"WOULD YOU LIKE TO PLAY AGAIN (Y/N)";           1A11
320 A$=UPPER$(INKEY$)                                                0835
330 IF A$="" THEN 320 ELSE IF A$="Y" THEN GOTO 10                    12B6
340 END                                                              036B
```

A well behaved program - if you do not want to play again, it returns you to BASIC in 340

```
350 REM ***************THE 'BRAINS' !!**********************          0EF4
360 FOR N%=1 TO BAS%:Z1%=AX%-(LX%-2)                                 0E04
370 Z2%=(X%-LX%-1)+(XS%*(Y%-TY%))                                    0B92
380 IF YS%=1 THEN Z2%=Z2%-XS%                                        0CC0
390 IF Z2%<1 THEN Z2%=(1-Z2%)+1                                      0B78
400 IF Z2%>W% THEN Z2%=(W%-Z2%)+W%                                   0C9F
410 AM%=-SGN(Z1%-Z2%):AX%=AX%+AM%:NEXT N%                            118C
420 PRINT FNT$(AX%,TY%)"  "CHR$(154)CHR$(154)CHR$(154)"  "           13DD
430 RETURN                                                           0508
440 PRINT FNT$(BX%,BY%)"  "CHR$(154)CHR$(154)CHR$(154)"  "           138A
450 RETURN                                                           050E
460 REM ****************PRINT SCORE**********************           1140
470 PRINT CHR$(7);FNT$(26,30);"SCORE:  PLAYER - "BP%"   COMPUTER - "AP%;  1E5F
480 RETURN                                                           0517
```

The evidence - the last two lines are the sub-routine that sounds the beeper and updates the score when points are won. Changing BP% to a higher number in line 110 will give you a much needed head start over the computer

FIXTURES.BAS by Tom Coughlan

We know from the mail we get that many PCW owners out there use their machines to help run their clubs and societies. A large number of these are sporting clubs. One of the major headaches the secretary of such a society has to deal with is arranging the fixtures - making sure that everybody plays everybody else the right number of times during the year.

Tom Coughlan's FIXTURES.BAS program aims to sort out those problems, and will give you a complete set of fixtures - home and away - for a whole season of whatever league you are dealing with.

As it is printed here, the game is set up to deal with six items (there is no reason why you should restrict yourself to teams - individuals will work just as well) each meeting twice - once at home and once away. If, however, your league has more members, it is quite easy to change the set up. Simply adjust the nt%=6 statement in line 90 to the correct number, and change the names in the DATA lines at the end of the program.

When changing data lines, there are one or two things that to remember. Each line must start with the word DATA, the items must be separated by commas (you cannot have commas within items), and if the items are strings (ie, words) rather than numbers, as they will be in this case, they must be enclosed in double quotation marks. If you follow the examples at the end of the program, all should be well.

```
Ok
edit 50
50 PRINT cls$;"THE 8000 Plus Thesaurus Throwing League":LPRINT "The 8000 Plus Thesaurus Th
rowing League":LPRINT

edit 90
90 nt%=5:gs%=INT(nt%/2):f%=((nt%-1)*(nt%/2))*2:bl$=" ":DIM s$(gs%)

edit 610
610 DATA "SOPHIE","KAREN","MARTIN","HARRY","PAUL"

620
Line does not exist
Ok
```

The changed lines which will print out our league tables. Note that if you run your altered program through CHECK3, the numbers will not be those printed here!

If your league has a large number of participants you may need to create extra lines at the end of the program to accomodate them. To do this simply type the next number in the line number series (it will be 290), leave a space and type DATA, and then continue your list with items in inverted commas. The program has been told to deal with items 20 characters long. Any that are shorter than that will be padded out with spaces, but any that are longer will be cut down to the required size. So it's bad luck, Wolverhampton Wander...

The program works by a process of elimination, keeping track of three lists at a time. Whilst it is doing this, it relays all its ruminations to screen. These are not important to the final result, so don't feel you have to keep track of them. As the program's writer says, they are only there to assure you that something is happening! There are a couple of points to bear in mind. One is, because the

program begins with a random element, the results will be different on different runs; and the second warning is about time. If your league has more than six items in it, it may be worth putting the kettle on once it has started, because going through all those ruminations which you see reflected on screen is a slow old process!

On the other hand, although it is slow, it does show some useful sorting and selecting techniques, and since 8000 Plus readers are so resourceful, we are sure that this program will find uses far beyond the sports field or snooker table!

Any application which requires the consideration of all possible permutations could find its starting place in this program. Despite its lack of speed, it could be used to investigate anagrams (if you redefine the DATA as letters rather than names, still enclosing the items in inverted commas), shuffle lists, and do a hundred similar jobs. On top of all that, it could even become a template for your own program. A listing with many possibilities.

```
10 cls$=CHR$(27)+"E"+CHR$(27)+"H":PRINT cls$                                    10D8
20 PRINT "PLEASE MAKE SURE THERE IS PAPER IN THE PRINTER."                       1F06
30 PRINT:PRINT "Press any key when ready."                                      17F6
40 WHILE INKEY$="":WEND                                                         0BE4
50 PRINT cls$;"THE SUPER LEAGUE":LPRINT "THE SUPER LEAGUE":LPRINT               237C
60 PRINT:PRINT "1990/91":PRINT:LPRINT "1990/91":LPRINT                          1BF3
70 PRINT "NOTE THAT FIXTURES ON MONITOR ARE FOR DISPLAY ONLY.":PRINT             26C5
80 PRINT "FINAL LIST ONLY COMPLETED WHEN ALL SERIES ARRANGED.":PRINT             2571
```

Setting up the screen and making sure that the printer has paper ready. You could personlise your system even more by renaming the league in line 50

```
90 nt%=6:gs%=INT(nt%/2):f%=((nt%-1)*(nt%/2))*2:BL$=" ":DIM s$(gs%)              1879
100 DIM mas$(f%):DIM cpy$(f%):DIM t$(nt%):DIM fin$(f%):sp$=SPACE$(45)           1B61
110 IF nt%/2<>INT(nt%/2) THEN ns%=nt%*2:GOTO 130                                14ED
120 ns%=(nt%-1)*2:RANDOMIZE PEEK(64504!)                                        10DA
130 FOR x=1 TO nt%:READ n$:t$(x)=n$:NEXT: ' team names process                  1F65
140 FOR x=1 TO nt%:L=LEN(t$(x)):IF L<20 THEN t$(x)=t$(x)+SPACE$(20-L)           1E40
150 IF LEN(t$(x))>20 THEN t$(x)=LEFT$(t$(x),20)                                 1215
160 NEXT                                                                        0424
170 i%=1:fi%=1:pri=1: ' initialise MASTER & FINAL list                          1970
180 FOR x%=1 TO nt%:FOR y%=1 TO nt%                                             1199
190 IF x%<>y% THEN mas$(i%)=t$(x%)+t$(y%):fin$(i%)=BL$:i%=i%+1                  181A
200 NEXT:NEXT                                                                   07B6
210 ok=FRE(""):m%=f%: REM main loop starts in next line                         192F
```

This section of the program sets up the lists; lines 130 to 160 read and adjust the size of the teams in the DATA statements at the end of the program.

```
220 FOR x%=1 TO ns%:PRINT STRING$(40,"-"): PRINT " SERIES NUMBER";x%:PRINT      2536
230 ML%=m%: REM set temporary multiplier to main multiplier value               2494
240 FOR q=1 TO ML%:cpy$(q)=mas$(q):NEXT: REM set up copy list                   1E9D
250 REM series loop                                                             09A9
260 FOR y%=1 TO gs%:t=1+INT(RND*M1%): GOSUB 400: IF ML%>0 THEN GOSUB 460        1EB5
270 IF y%<>gs% AND ML%<=0 THEN 280 ELSE PRINT s$(y%):NEXT y%:GOTO 300           2006
280 y%=gs%:x%=ns%: REM cannot complete FINAL list                               1875
290 PRINT:PRINT "OUT OF COMBINATIONS. STARTING AGAIN.":GOTO 170                 21AF
300 GOSUB 490:IF x%<>ns% THEN GOSUB 550                                         11D2
310 m%=m%-gs%: REM reduce main multiplier for next series                       1D32
320 NEXT x%                                                                     049B
330 REM end of main loop, about to print complete final fixture list            24FB
340 FOR p=1 TO f%:IF p=1 THEN LPRINT BL$,"SERIES NUMBER ";pri                   1B74
350 LPRINT fin$(p)                                                              0838
360 IF p/gs%= INT(p/gs%) AND p<>f% THEN 370 ELSE 380                            1621
370 pri=pri+1:LPRINT STRING$(40,"-"):LPRINT BL$,"SERIES NUMBER ";pri            2165
380 NEXT                                                                        042E
390 PRINT "END OF PROGRAM":END                                                  0FA2
```

The business bit of the program. It sifts through combinations, sorts out the final list, and prints it to paper

```
400 REM check selected teams AND blank OUT COPY LIST                            1BDF
410 s$(y%)=cpy$(t):ta$=LEFT$(s$(y%),20):tb$=RIGHT$(s$(y%),20)                   19F0
420 FOR z%=1 TO ML%                                                             0842
430 IF INSTR(cpy$(z%),ta$) OR INSTR(cpy$(z%),tb$) THEN 440 ELSE 450             1BFC
440 cpy$(z%)=BL$:ML%=ML%-1                                                      0AB9
450 NEXT: RETURN                                                                0953
460 FOR a%=1 TO m%:FOR b%=1 TO m%-a%: ' shunt blanks to end of COPY list        2124
```

```
470 IF cpy$(b%)=BL$ THEN SWAP cpy$(b%),cpy$(b%+1)                    1204
480 NEXT:NEXT: RETURN                                               ØC82
490 REM alpha sort series and copy it to FINAL list                 1BE5
500 FOR s%=1 TO gs%:FOR is%=1 TO gs%-s%                             1180
510 IF s$(is%)>s$(is%+1) THEN SWAP s$(is%),s$(is%+1)                1385
520 NEXT:NEXT                                                       Ø7C2
530 FOR q=1 TO gs%:fin$(fi%)=s$(q):fi%=fi%+1:NEXT                   148F
540 RETURN                                                          Ø5ØD
550 FOR chk=1 TO m%:FOR ck=1 TO gs%: ' blank and shunt MASTER list  213B
560 IF INSTR(mas$(chk),s$(ck)) THEN mas$(chk)=BL$                   153C
570 NEXT:NEXT                                                       Ø7D1
580 ok=FRE(""):FOR a%=1 TO m%:FOR b%=1 TO m%-a%                     1Ø99
590 IF mas$(b%)=BL$ THEN SWAP mas$(b%),mas$(b%+1)                   11DE
600 NEXT:NEXT: RETURN                                               ØC6E
```

All the sub-routines for processing the information once it has been sorted

```
610 DATA "ASTON VILLA","LIVERPOOL","EVERTON","WIMBLEDON"            1C29
620 DATA "MANCHESTER UNITED","TOTTENHAM HOTSPUR"                    1964
```

The DATA lines, which you should change to personalise your program. Make sure the number of items on the list agrees with the nt% in line 90

The three lists that the Fixtures program uses are called the "master", "copy" and "final" lists. A series is one complete set of fixtures (or permutations) involving all the items in the league (or all bar one if there are an odd number of teams).

The master list is the list of all possible fixtures. Once it has been set up, it is copied into the copy list. The program chooses one game at random from this list. All other games including those two teams are then blanked off from the list, and the other games in the series are chosen from the shortened list. Once the series is complete, these games are put onto the final list, blanked off from the master list, and the process begins again.

Or should do. It often happens, however, that the program gets down to the last couple of series, but has run out of combinations. At this point it goes right back to the start.

On the other hand, if everything has worked through, all it has to do is print out the complete final list.

How to type in a listing

The first thing to do is to boot up CP/M, by loading the disc into the machine at turn-on time; when it settles down type in the word BASIC and hit [RETURN].

You will be given a bit of information about Mallard BASIC, and the prompt "Ok". You can now begin to type in the program.

Each line begins with a number. This must be typed in, along with the text that follows it, but not the list of numbers on the right hand side (these are part of a checking procedure we publish from time to time). Make sure that what you type is exactly what is on the page, especially in terms of punctuation. One semi-colon instead of colon may not seem much to you, but it could spell disaster for the program.

Be careful, as well, that you differentiate properly between "0" (the number zero) and "O" (the capital "O"), and between "1" (the number "1") and the lower case "L". From such small errors, great crashes flow.

If you do spot an error in a line as you are typing it in, use the cursor keys to go back and amend it. Once you are sure that a line is typed in correctly, then hit the [RETURN] button and go on to the net one. If you subsequently notice a mistake, type "edit", followed by the line number and [RETURN], and you will be given the chance to make your correction. Once you have typed in the whole program, check that everything is there as it should be by typing "list" [RETURN]. The whole program will scroll past you. To stop it at any point press [f5], and to restart it press [f5] again.

If all is present and correct, save your program to disc by typing "save" followed by the program name, which must be in quotation marks. Now comes the moment of truth. Type run [RETURN]. If all has gone well, it will work first time.

If not, you may be given an error message, often with a line number attached (which may or may not help - often that can be the line in which an earlier mis-type can become critical) so that you can rectify the fault.

If there is no fault there, or no line number, check the rest of the program with a fine toothcomb.

Don't forget to save the improved version of the program (use the same filename and the old, bugged version will be deleted).

When you want to use the program again you must first load BASIC as before, the type: "LOAD "filename" [RETURN]. It can then be used as before.

```
THE SUPER LEAGUE

1990/91

                SERIES NUMBER  1
LIVERPOOL               ASTON VILLA
MANCHESTER UNITED       TOTTENHAM HOTSPUR
WIMBLEDON               EVERTON
-----------------------------------------
                SERIES NUMBER  2
ASTON VILLA             EVERTON
TOTTENHAM HOTSPUR       LIVERPOOL
WIMBLEDON               MANCHESTER UNITED
-----------------------------------------
                SERIES NUMBER  3
EVERTON                 ASTON VILLA
LIVERPOOL               TOTTENHAM HOTSPUR
MANCHESTER UNITED       WIMBLEDON
-----------------------------------------
                SERIES NUMBER  4
ASTON VILLA             MANCHESTER UNITED
EVERTON                 TOTTENHAM HOTSPUR
LIVERPOOL               WIMBLEDON
-----------------------------------------
                SERIES NUMBER  5
EVERTON                 LIVERPOOL
TOTTENHAM HOTSPUR       MANCHESTER UNITED
WIMBLEDON               ASTON VILLA
-----------------------------------------
                SERIES NUMBER  6
EVERTON                 WIMBLEDON
LIVERPOOL               MANCHESTER UNITED
TOTTENHAM HOTSPUR       ASTON VILLA
-----------------------------------------
                SERIES NUMBER  7
ASTON VILLA             WIMBLEDON
MANCHESTER UNITED       LIVERPOOL
TOTTENHAM HOTSPUR       EVERTON
-----------------------------------------
                SERIES NUMBER  8
ASTON VILLA             LIVERPOOL
MANCHESTER UNITED       EVERTON
WIMBLEDON               TOTTENHAM HOTSPUR
-----------------------------------------
                SERIES NUMBER  9
LIVERPOOL               EVERTON
MANCHESTER UNITED       ASTON VILLA
TOTTENHAM HOTSPUR       WIMBLEDON
-----------------------------------------
                SERIES NUMBER  10
ASTON VILLA             TOTTENHAM HOTSPUR
EVERTON                 MANCHESTER UNITED
WIMBLEDON               LIVERPOOL
```

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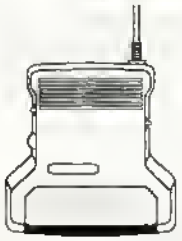

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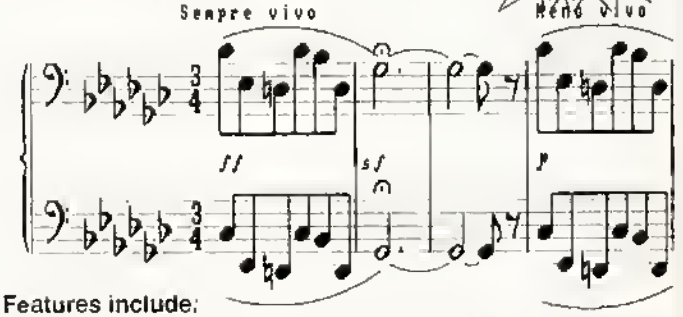

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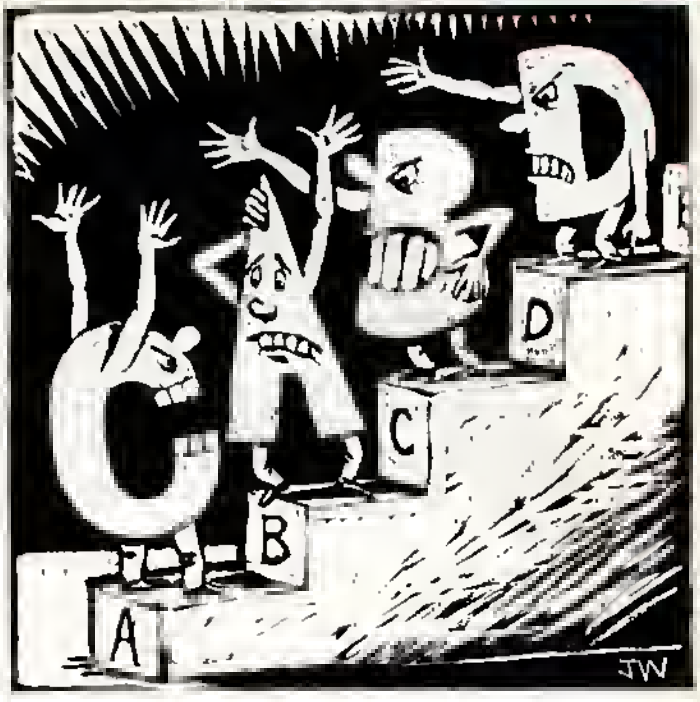


Index, How to..

A page in the thoroughly sorted, carefully catalogued company of infamous PCW pundit, Dave Langford

Many years ago I completed my first full-length book and re-typed the whole horrible thing in a fair copy ... ah, those ghastly days when peasants tilled fields with pointed sticks, doctors clamped leeches on your tender parts and authors bashed out typewritten drafts. Then it was time to prepare the index - another gruelling task.

The index sorting system was marginally high-tech, in that the entries were handwritten on Fortran computer cards provided by a generous employer (the Ministry of Defence). My reward for this drudgery was that the editor who bought that book has since published lots himself, each with a bibliography which cites *War in 2080: the Future of Military Technology* by D. Langford, whether or not it's relevant. Like most of the books he lists, it invariably has a star against it; as editor/author John Grant explains, "I have indicated by * a book which has a lousy index."

Thanks, boss.

Yes, indexing is an art, even when your computer shoulders the burden of actual sorting. Since those laborious days I've written various indexing programs for use with word processors (Ansible Index for LocoScript is the one I am not going to plug here), and still find there are many creative human choices to be made at both ends of the process. First you pick which words, phrases and themes are to be indexed: for example, it's amateurish to include mere "passing references" like that to the Fortran programming language above. When the program has done its sinister work you'll want to edit and titivate the text.

It's worth taking expert advice. One good guide is *Indexing, The Art Of* by G.Norman Knight (1983). Also, the British Standards Institution does several pamphlets on the niceties, like BS 1749:1985, the definitive word on alphabetical arrangement ... which all by itself is trickier than you think.

The Society of Indexers can be contacted at 16 Green Road, Birchington, Kent, CT7 9JZ.

Buried fun

So much for the morally worthy bit. Because indexing is hard work, there's a strong temptation to conceal some little joke in the forbidding columns of the index. These can be great fun to spot.

As an example of something witty rather than actually funny, a friend of mine wrote a book of which one page contains a tiny puzzle about the author of a long-forgotten work. The mystery writer isn't mentioned in the text, but any reader guessing the correct name will find it indexed in its proper alphabetical place....

Much funnier is the index of *The Clothes Have No Emperor*, a chronicle of Ronald Reagan's presidency by Paul Slansky (1989). The author must have giggled insanely as he compiled the long, long entry on Reagan himself, with something like 140 subheadings:

"Blames Carter ... blames the media ... blames miscellaneous others ... Bond, James, honoured by ... books about ... bullet in chest temporarily unnoticed by ... campaign oratory of ... cancerous pimple called 'friend' by ..."

There are 18 page references under "challenge to accuracy of", 19 under "inability to answer questions of", 17 under "macho bluster of", 22 under "misidentification problems of" and 33 under "mis-statements by".

It's vaguely reminiscent of the non-story in J.G.Ballard's most recent collection, which consists entirely of an index along these lines to a book which now need never be written.

Perhaps the shortest, sharpest and rudest use of the index as a weapon is in Bernard Levin's *The Pendulum Years* (1970), whose account of 1960s Britain naturally includes much about the *Lady Chatterley's Lover* censorship trial — where all the juiciest four-letter words were solemnly bandied in court. If you go to the index and look up a certain reprehensibly anatomical term, you'll find it rather crushingly referenced: "see Griffith-Jones, Mervyn" (the prosecuting counsel). Ouch.

Sheer insanity

From time to time someone has the bright idea of giving a humorous book an elaborate, wordy index full of jolly laughs. Purists are sniffy about this, and the fun is usually poisoned by consumer resistance to sitting and reading through an index. Once in a while, though, you do find something worthy of a few quiet chuckles.

A.P.Herbert's various books of "Misleading Cases" have highly tendentious indexes, full of little digs in the ribs. Once, though himself an MP, Herbert chafed at the unfairness of Parliament's failure to observe things like licensing laws which it imposed on the rest of the country ... so he made a list of all the activities Members could presumably get away with in their privileged House, and strewed them through the index of *Uncommon Law* (1935):

"ADULTERATED FOOD: May be sold at the House of Commons ... ARSON: Is lawful, in the House of Commons ... BRANDY: May be sold at tea-time, in the House of Commons ... BURGLARY: In the House of Commons, is lawful ... CHILDREN: Born in the House of Commons, need not be registered ... CHLOROFORM: May be sold at the House of Commons...."

Another of Herbert's books, *What a Word!* (1935), crusaded for better prose with splendid if not very functional index headings like "Bacilliferous Beverages", "Cannibal English" and "Septic Verbs". Charming.

The index as prose poem is illustrated in that famous collection of bad verse *The Stuffed Owl*, edited by D.B.Wyndham Lewis and Charles Lee (1930). This faithfully chronicles all the poets' daftest metaphors, so you find entries like "Worm, lisping ... militant ... far-fetched, *see* Silk-worm" and can follow the cross-reference to: "Silk-worm, Spartan tastes of ... sinks into hopeless grave."

There is social comment here too: "Frenchmen, fraudful, mix sand with sugar" and "Bilious attack, poetical description of."

But perhaps the least-known, the most useless and the most grimly instructive index of them all (for aspiring writers at least) is the one appearing in Hilaire Belloc's satirical *Caliban's Guide to Letters* (1943). After a cursory scroll the listing, slowly it dawns that every reference is to:

"Action, Combination of, with Plot, Powerful Effect of in Modern Novels, see Pulping, p.187. Advertisement, Folly and Waste of, see Pulping, p.187. Affection, Immoderate, for our own Work, Cure of, see Pulping, p.187. Amusements of Printers and Publishers, see Pulping, p.187. Art, Literary, Ultimate End of.."

Tipoffs

Tipoffs marches on!!

Is LocoScript driving you mad? Can't face that long march through the CP/M manual? Does BASIC make you tear out your hair? Don't just fight like a mad march hare – come to Tipoffs, where time-saving hints and tips spring everywhere. Welcoming you into the new season are tips on LocoScript, LocoFile, BASIC and Micro Design, and Daniel Evans of Putney wins £30 for his sneaky way of burrowing into CP/M programs from BASIC.

If you know any gems of information in LocoScript or other popular program, tell us – you could win hard cash! Write to *Tipoffs, 8000 Plus, 30 Monmouth St, Bath BA1 2XF*. It's Freepost.

Giving voice

SM Engineering's speech synthesiser – the add-on that gives a rather metallic but understandable 'voice' to your PCW – can't quite read an ASCII file (see PostScript, October). However, SM Engineering advise that a product called CHINWAG is designed specially for use with the synthesiser. It is available from Derek Rogers Professional Software on 041-334 8902 for £29.95.

N Porter, Littlehampton, Sussex

8000 Plus: SM Engineering are on 0323 766262 and the speech synthesiser costs £49.95.

SiC joke

What's the (+SiC) command ([+|sc) for in LocoScript 2?

J Bibby, London NW4

8000 Plus: It tells LocoSpell that the word it's attached to is correctly spelt – for example, you might write "The attractions of Penistone(+SiC)" to guard against one of LocoSpell's bizarre suggestions. If you don't have LocoSpell then the feature has no

Go for a drive

If you've just read in the B drive a disc normally used in the A drive of your PCW 8512, you'll get an error if you then try to read a regular B drive disc in the B drive.

The reason is that CP/M thinks the disc in there is still the A drive one. To get round the problem, just press [STOP]; no more error messages.

Russell Salford, Kettering.

Fine words

Owners of the latest versions of LocoSpell have a quick way to edit user dictionaries (if you can't get the following to work, yours is probably an old version – phone Locomotive on 0306 740606 for details on how to upgrade). Doing it with [f7] and 'user dictionary upkeep' works but is very slow. Here's a quicker way.

Copy USERSPEL.DCT and LOCOSPEL.DCT into drive M. Remove the discs from A and B. Create a new document in M called TEMP and press [f1] selecting 'insert text'. Cursor over USERSPEL.DCT and [ENTER]. The words in the user dictionary are inserted into TEMP.

Finish editing and then erase USERSPEL.DCT from M. Edit the document you just created, TEMP. The words appear in the document just created where they can be edited as quickly as normal. When finished, press [f7] and spell check the file. Select the 'automatic addition' option: all the words will be added to a new user dictionary in M called USERSPEL.DCT.

Now simply re-insert you start of day disc and copy the newly created USERSPEL.DCT from M into the same group as the existing one on disc using [f3] 'copy'.

Sounds involved, but it's actually much easier and quicker than the usual method with 'user dictionary upkeep'..

J Whittle, Bicester, Oxon

Add some zap

A common requirement for tips involving SID is knowing where in a file to find a sequence of bytes. P Ottenhof gave a tip in February's Tipoffs showing how to do this using PUT.COM, but a quicker way is by using SUPERZAP, available in the Public Domain for a couple of pounds. (See any public domain supplier in the ads in 8000 Plus).

As an example, here's how to do the tip published last December in SUPERZAP, in which you could search for the sequence 0A 32 AF 1E 0C 0F 03 in any .EMS file (LocoScript or CP/M) in order to change the disc drive whirring time from an annoying five seconds to a more sensible two.

1. Start up CP/M: replace the disc with the SUPERZAP one. Type **superzap** [RETURN]. A menu and list of files on disc shows up.
2. Replace the disc with one that holds the .EMS file to alter. Type **ca** to change to the new disc in A and display the directory.
3. Use [ALT]i and [ALT]j to select the .EMS file, then press **e** to go into edit mode. The menu changes, and the directory is replaced by a hex listing of the file.
4. To find the sequence 0A 32 AF 1E 0C 0F 03, press **h** and then type in the seven pairs of codes. SUPERZAP finds them in a couple of seconds, indicating the 0A by a small arrow.
5. Press **e** a couple of times to change the sector, then use [ALT]i and [ALT]j to get to the 32 byte. Type in **14** over the 32. When you are quite sure all is correct, type [ALT]z to save the change.

And that's all there is to it. If you get cold feet, type [ALT]q to cancel at any time. SUPERZAP is catalogued as number 77 in the CBMBBUK volumes for the OCP/M section.

Norman Fitch, Purley, Surrey

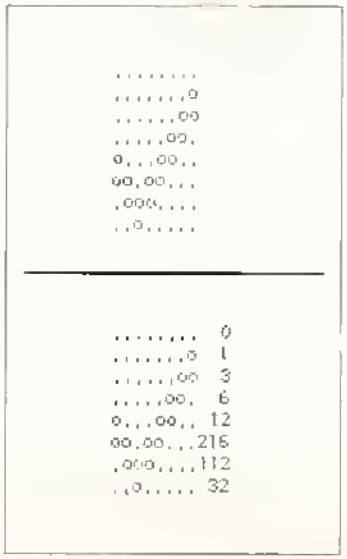
8000 Plus: Thanks for the information, Norman.

Character forming

In the program I am writing, I would like to be able to use on screen some characters that aren't in the CP/M set – among others, an empty box and a tick. So how can I incorporate characters of my own design in a program?

Nigel East, London

8000 Plus: It's dead easy. First you design your character as a series of dots on an 8x8 grid. (Print some grids out in LocoScript if you have a lot to design). Let's suppose your tick looks like the one below. Now label the top of each column on the grid, going from left to right, as 128, 64, 32, 16, 8, 4, 2 and 1. For each row, add up the total 'score' given by the dots. For example, the top row is 1, the second 3 etc. You end up with something like the second picture. Now, the following BASIC



Back in a tick: designing your own screen characters is simple in BASIC

listing will set character 200 – normally ô – to be that tick.

```
10 MEMORY &HBFFE
20 FOR HEX=&HC070 TO &HC098 : READ pk : POKE hex,pk : NEXT hex
30 DATA 243, 62, 129, 211, 241, 62, 130, 211, 242
40 DATA 175, 95, 103, 22, 184, 58, 153, 192, 111, 41, 41
50 DATA 41, 25, 17, 154, 192, 235, 1, 8, 0, 237, 176
60 DATA 62, 133, 211, 241, 62, 134, 211, 242, 251, 201
70 POKE &HC099, 200
80 FOR row=1 to 8 : read binary(row)
90 POKE &HC099+row, (binary(row)) : NEXT row
100 cl=&HC070 : CALL cl
110 DATA 1,3,6,12,216,112,32,0
```

Run the program. Not much seems to happen, but from now on, even if you run other listings meantime, PRINT CHR$ (200) gives that tick on screen. (If you LPRINT CHR$ (200) though you still get ô printing out). To set a further character – 201 say – just repeat the substance of lines 70-110 but replacing 200 by 201 and the data lines in 110 by the data lines appropriate to the new character.

Dear diary

I use LocoFile/Mail to produce a daily diary in which I can record birthdays, anniversaries etc. Each record requires a date for each day of the year. Can you devise a program which does this without having to type in all 365 dates for the records?
S Marriott, St Michael's, Gwent

8000 Plus: There are various products advertised in 8000 Plus that supply you with a blank LocoFile/ LocoMail diary like this, but you might like to try the following BASIC routine. If you're not sure how to type in or save a BASIC listing, see this month's Listings pages.

When you run the listing, make sure a disc is in the A drive with about 10K of free space on it – this will be the disc that will hold the diary file eventually in LocoScript.

```
10 OPEN "O",1,"a:diary"
20 DIM day$(7),month$(12),days%(12)
30 FOR j%=1 TO 12 : READ month$(j%),days%(j%) : NEXT
40 FOR j%=1 TO 7 : READ day$(j%) : NEXT
50 PRINT "Jan 1 is what day? (1=Sun, 7=Sat)"
60 a$=INPUT$(1) : IF a$<"1" OR a$>"7" THEN 60
70 PRINT "Leap year? (y/n)"
80 b$=INPUT$(1) : IF INSTR("yYnN",b$)=0 THEN 80
90 d%=0 : dw%=ASC(a$)-49 : m%=1 : IF UPPER$(b$)="Y" THEN days%(2)=29
100 d%=d%+1 : IF d%>days%(m%) THEN d%=1 : m%=m%+1
110 dw%=dw%+1 : IF dw%=8 THEN dw%=1
120 PRINT #1,day$(dw%);d%;month$(m%)
130 PRINT #1,CHR$(12);
140 IF m%<12 OR d%<31 THEN 100
150 CLOSE
160 DATA January,31,February,28,March,31,April,30,May,31,June,30
170 DATA July,31,August,31,September,30,October,31,November,30,December,31
180 DATA Sunday,Monday,Tuesday,Wednesday,Thursday,Friday,Saturday
```

This listing in BASIC may look like an uncharted jungle of facts and figures, but it actually is asking you two easy questions...

...and writes out a day-to-a-page diary that can be inserted into a LocoScript document

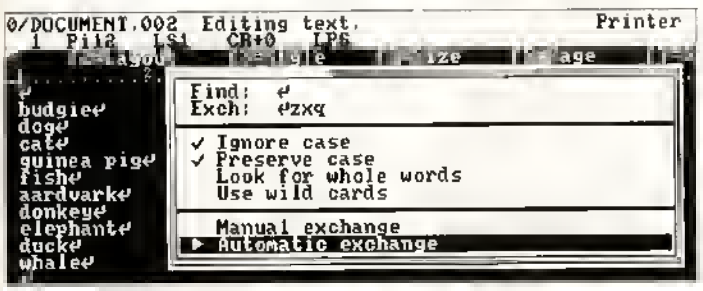
When you run the listing, make sure a disc is in the A drive with about 10K of free space on it – this will be the disc that will hold the diary file eventually in LocoScript.

10 OPEN "O",1,"a:diary"
20 DIM day$(7), month$(12), days%(12)
30 FOR j%=1 TO 12 : READ month$(j%),days%(j%) : NEXT
40 FOR j%=1 TO 7 : READ day$(j%) : NEXT
50 PRINT "Jan 1 is what day? (1=Sun, 7=Sat)"
60 a$=INPUT$(1) : IF a$<"1" OR a$>"7" THEN 60
70 PRINT "Leap year? (y/n)"
80 b$=INPUT$(1) : IF INSTR ("yYnN",b$)=0 THEN 80
90 d%=0 : dw%=ASC(a$)-49 : m%=1 : IF UPPER$(b$)="Y" THEN days%(2)=29
100 d%=d%+1 : IF d%>days%(m%) THEN d%=1 : m%=m%+1
110 dw%=dw%+1 : IF dw%=8 THEN dw%=1
120 PRINT #1,day$ (dw%); d%; month$ (m%)
130 PRINT #1,CHR$(12);
140 IF m%<12 OR d%<31 THEN 100
150 CLOSE
160 DATA January, 31, February, 28, March, 31, April, 30, May, 31, June, 30
170 DATA July, 31, August, 31, September, 30, October, 31, November, 30, December, 31
180 DATA Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday

There is now a file called DIARY on the disc in the A drive. When the 'Ok' reappears, remove discs from drives and press [SHIFT] [EXTRA] [EXIT]. Insert your Loco startup disc; when the opening screen comes up, put the disc that you put the diary file on in the A drive and press [f7] or [f1] for disc change. Create a file called , say, DIARY.91 on the disc. In it, press [f1] or [f7] and select 'Insert text'. You are returned to the disc manager. Move the cursor over the file DIARY and [ENTER] twice. You see the right dates for each day being inserted each on a separate page, just as required.

This works for any year, of course; you just have to know what day of the week January 1 is and if it's a leap year..

Kindly sort



A bizarre replacement trick...

A couple of months ago you mentioned a way of sorting items into order in LocoScript, but it never materialised! Please tell me, because I can't wait any longer!
J Kelly, Brighton, W Sussex

8000 Plus: This only applies to latest versions of LocoScript 2 with LocoSpell. If your options don't appear on your menu, contact Locomotive for an upgrade on 0306 740606.

Run up LocoScript. Suppose you have a document full of words that you want sorting into order. The words must be one to a line with a [RETURN] before the first item. Move it to a group in the M drive that does not contain a user dictionary and edit it in there.

At the top of the document, press [EXCH] and give [RETURN]

(Left) ...that makes all the words in your list unrecognised by LocoSpell. So, selecting 'automatic addition' to a new user dictionary...

(Right) ...and inserting the user dictionary into a new document sees all the words in order. Just strip off the zxq, and change all os to spaces, and there you have a sorted list. And it's easier than it looks!

as the text to be replaced and [RETURN]zxq as the text to replace it with. Select 'automatic replacement to end of document'. Each word should now begin with the letters zxq.

Back at the top, press [f7] for a spell-check and select 'automatic addition to user dictionary'. Finish editing and leave the document.

There should be a USERSPEL.DCT created in that group of the M drive. This contains all the words in your list, each beginning zxq. Create a new document in the same group and in it press [f1] selecting 'insert text'. Give the file USERSPEL.DCT as the one to insert. Into the new document you see all the zxq- words in your list begin typed in, in alphabetical order.

Now all you have to do is go to the top, press [EXCH] again replacing zxq by nothing, replacing automatically, and save. Your words are now sorted into order. Copy the saved document onto a disc with [f3] and there you have it. If you want more than one word on a line, replace all [SPACE]s by something like ø ([ALT] o) before spell checking and turn them back to spaces afterwards. This method can't be used to sort indexes because LocoSpell ignores numbers. The best way to sort indexes is by using Ansible's Index program, (£35), available by phoning 0672 62576.

Disc dancing

What are the advantages of single density drives – the A drives of 8256s and 8512s? If none, why are they fitted? Can I fit a B drive into my PCW's A drive? And if any disc can be formatted in any drive, why are some discs sold as being 'high-density' discs, specially for use in 9512s, or the B drive of 8512s?
M Andrews, London W1N

8000 Plus: Single density drives have no particular advantage; presumably they were fitted as standard on 8256s – the first PCW model – through cost factors. You can't fit a B drive into the A drive because the PCW won't start up on a B drive; technically it may be possible to tweak the PCW to do this, but I've never seen it done.

'High density' discs are made at the same on the same production line as normal discs, but if subsequent tests at the factory show they are of slightly higher quality than normal, they are branded as such and sold at a slightly higher price – so there's no deception going on!

In theory you have more chance of a normal disc failing if you use it as a B-drive disc than a high-quality disc, but it's never happened to me.

Action man

I need to find a simple way in LocoScript of writing an 'action' column in minutes pages, as shown here. Is there one?
J Bergin, Chippenham, Wilts

8000 Plus Not really – I rather suspect you've found the quickest way already! There are various ways to achieve the setup, all of them a bit involved; the one I find easiest is this. First is how to achieve the effect shown here. Next is a general method for putting margin notes into a continuous run of text, taken from the 8000 Plus Tipoffs Collection book, where you can find screen shots illustrating it.

ACTION COLUMN METHOD
In a new document called say MINUTES, press [f2] and change the layout. Set the margins to be at (say) 10 and 60. EXIT to the document. Type in the minutes as normal but don't bother with any italics, holds or underlines. Finish and exit. Now press [f1] ([f7] in LocoScript 1) and make an ASCII file selecting 'page image' and making a new file called MINUTES.ASC in the same group. When finished, start a new document called MINUTES.ACT or something. Press [f2] to change layout and set margins at zero and 80, putting a tab at 64. EXIT to the document. Press [f1] ([f7] in LocoScript 1) and select 'insert text'; in the disc manager, give the file to insert as MINUTES.ASC.

In comes the minutes text. Now go down and, wherever you want an action margin note, press [EOL] [TAB] and type the word. Put in bolds, italics, underlines etc if required. Save and print as normal; you can now erase MINUTES and MINUTES.ASC.

If you want that vertical line, of course you can use the vertical bar (on the 9512 keyboard, or [EXTRA] , or [EXTRA] I on a 8256/8512); but then to make it join up vertically, you also have to use half line spacing ([+] LS ½P [ENTER]) and put an extra [RETURN] at the end of each line of text; it's easier with a ruler and biro!

```
3. DECISION It was decided the Vehicle Manager
should investigate the possibility.↵
↵
4. WATER SAVING SWITCH Many problems - in
particular overflowing - have been encountered
following the funny business in the Gents.↵
↵
5. DECISION The Health Manager was to resolve the
matter.↵
```

First type your document with narrow margins and make a 'page

```
|.page |↵
3. DECISION It was decided the Vehicle Manager→          | VEHICLE↵
should investigate the possibility.→                     | MANAGER↵
                                                         |↵
4. WATER SAVING SWITCH Many problems ↔ in→               |↵
particular overflowing ↔ have been encountered→          |↵
following the funny business in the Gents.→              |↵
                                                         |↵
```

Then insert it into a new document whose margins are wider and which has a tab set where the action column is to start

```
3. Decision  It was decided that the Vehicle Manager      VEHICLE
was to investigate the possibility of the exhaust         MANAGER
emissions being carcinogenic.

4. Water Saving Switch  Many problems, particularly
overflowing, had been encountered following the
installation of a water saving switch modification to
urinals at various points around the unit. The matter
required investigation and had not yet been resolved.

5. Decision  The Health Manager was to resolve the        HEALTH
matter.                                                   MANAGER
```

To achieve an effect like this is not too easy in LocoScript but it can be done...

MARGIN NOTE METHOD
Suppose that you normally write text between a left margin of 10 and a right margin of 80, but you want to leave a space at the right for notes. You need to have one format for writing text between columns 10 and 60, and one for notes between columns 64 and 80 (leaving a small column gap).

LocoScript 1: *To set up the layouts, press the 'f2=Layout' key and then [ENTER], which picks the 'Brand New Layout' option. You are now dropped into the 'Editing Layout' screen – look at the top to see which layout you are editing; probably it will be number 1.*

Cursor down and set the left margin at 10 and the right margin at 60. Now press [EXIT] to store this layout. From the editing screen, repeat the process to get a second layout with margins at 64 and 80. Again, make a note of the number LocoScript assigns – probably '2'.

LocoScript 2: *Define two layouts, respectively layout 1 and 2, with margin settings as above, by pressing [f1] then [ENTER] for 'document setup' then pressing [f2] for 'layouts', 'Change stock layouts' and select first Layout 1 then Layout 2.*

*Type in all your text using the first (narrower) layout. To select this, type [+] **LT1** [ENTER] in LocoScript 2 or [+]**L1** [ENTER] in LocoScript 1. Then go through finding the points which you need to have margin notes for.*

LocoScript 1: *On each line to be annotated, type a [RETURN] at the end of the line above, insert the code for the wider layout (with [+]**L2** [ENTER]) type [TAB] at the end of the next line to take you into the note column, type the note, enter the code for the narrower layout again ([+]**L1**[P [ENTER]) and press [RETURN].*

LocoScript 2: *On each line to be annotated, press [EOL] [TAB] and type the text of the note. Then type [+]**LT1** [ENTER] [RETURN] immediately after the note. Go to the line before and press [EOL] [+] **LT2** [ENTER] [RETURN]. It looks messy on screen but all slots into place when you're finished.*

Don't use justified text as the process of inserting footnotes mucks things up

Graphic point

Is there any software that will, without too many intermediate operation, enable me to draw graphs? I have been told that BASIC has no such facility but that GSX may do this.
H S Curran, Wirral, Merseyside

8000 Plus You can use GSX in BASIC, but it's a bit involved and there is little documentation telling you what to do. Try HiSoft Pascal – a language similar to BASIC but much faster. It can use GSX routines quite neatly (and includes examples in the manual) enabling you to devise plotting and graphing programs of your own design. HiSoft is on 0525 718181 and Pascal costs £50. You'll need a manual on standard Pascal – £10 or less from your local bookshop – and, if you have a 9512, a dot matrix printer.

Hard sell

I would like to sell some PCW programs I have written in BASIC. Can I include BASIC.COM, SUBMIT.COM files and so on, on the disc I send people?
M Ward, Peterborough, Cambridge

8000 Plus Copyright dictates that you can't include, on any disc you sell, any of the programs that come on your CP/M master discs – even though all your intended customers have them already! All you can sell is your original BASIC listing, together with a manual showing customers how to copy BASIC.COM, J14CPM3.EMS, SUBMIT.COM

Type casting

I keep a list of my cassettes in a LocoScript file. When I buy LocoFile, will I have to retype the details to use them in the database?
Bob Hollings, Eastville, Bristol

8000 Plus No. Just put the details of each one on a separate page; then LocoFile can read them all.

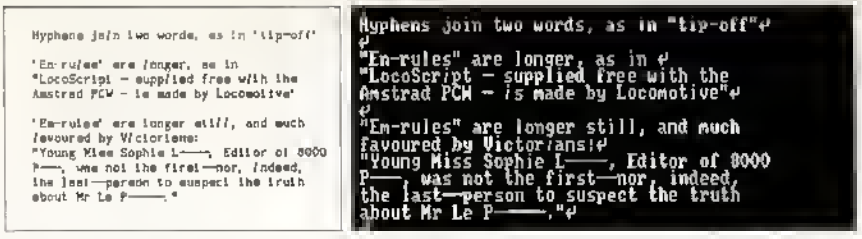
Copy cat

When working with LocoScript (2.28), how can I get more than one standard document to be copied automatically to the M drive on startup? Any TEMPLATE.STD is copied to the M drive on startup, where it can be accessed thereafter. But I have about 20 documents that I need available for regular filling, and it's impossible to call them all TEMPLATE.STDs!
Mike Potter, Gnosall, Stafford

8000 Plus If you have LocoFile, call them a name ending with .DAT. These will get copied on startup into the corresponding group on drive M.

Mercy dash

A quick way to get a very long dash in LocoScript 2 is to press [ALT] followed by one or more hyphens. To make the dash as long as you wish, just keep pressing [ALT] hyphen.
Irene Measures, Hitchin, Herts



Hyphens are just hyphens, but in LocoScript 2, [ALT] hyphen gives a dash (or 'en-rule'). They link up too, so that several [ALT] hyphens in a row produce a very long dash ('em-rule') or even those hyper-long dashes beloved of Victorian novelists

Tip of import

Contrary to rumour, it is not impossible to import files into Mini Office's database – just a bit complicated! A BASIC listing will do the trick.
P Hambling, Okehampton, Devon

8000 Plus The tip involves a longish BASIC listing, but anyone who would like a copy of Mr Hambling's tip can get one from us. Just send an sae and mark your envelope "Mini Office Tip".

Key facts

Is it possible to set up and save macros in Protext? Can I change what the function keys produce?
E Chester, Morpeth, Northumberland

*8000 Plus Yes. Here are a few examples. Just type these commands at the a> prompt ending with [RETURN]. Or save them all as lines in a normal file called say PHRASES and then at the a> type **x phrases** [RETURN].*
*1. **key n 'Yours sincerely^13^E Chester'** makes [EXTRA]n produce the phrase 'Yours sincerely [RETURN] E Chester'.*
*2. **key c '^254^count^13^'** makes [EXTRA]c put you into command mode, type COUNT and then [RETURN], thus giving a word count. That ^ is given by pressing [EXTRA]u, by the way.*
*3. **key v '^254^count^13^'** does the same for [EXTRA]v, but as [f3] automatically returns whatever [EXTRA]v does, the same effect is got by pressing [f3].*
*4. **key i '^24^i'** makes [EXTRA]i insert an italics-on code – and as [f5] returns whatever [EXTRA]i does, [f6] does the same.*

In the same way, [f2] returns the same as [EXTRA]a, [f4] the same as [EXTRA]g, [f5] the same as [EXTRA]w, and [f8] the same as [EXTRA]j. You can change what [f1] and [f7] return, but it's a bit fiddly, involving the use of expansion tokens and all sorts of stuff like that – read the Protext manual's section on CONFIG, 'Setkeys for PCW' option if you're really keen.

Going back

Is there a backspace feature in LocoScript 1 or 2? I can't find one despite hours of searching the manual.
Jean Richards, Wrexham, Clwyd

8000 Plus No. The usual function of backspace on a typewriter is to correct mistakes, which would of course be redundant on a word processor. If you want to overprint characters, print two lines on top of each other using zero line spacing and any pitch size except proportional. The first line has the basic text, beginning with [+]ls0 [ENTER] and ending with [RETURN]; the second contains just the overprinted characters, placed at the right position along the line using spaces, and ends with [-]ls [RETURN].

To a mouse

I would like to use my mouse in BASIC programs but have absolutely no idea how this can be done. Can you help me?
P Pullen, Reading, Berks

8000 Plus Here's an example using the Kempston mouse. The precise details will vary depending on the mouse you have, but it should only mean changing a few of the numbers in the listing given. Check your mouse manual for details.

The mouse generates an x and a y co-ordinate telling you where it is currently pointing, and also a variable telling you which of the two buttons (on the Kempston mouse) are up or down. For example, if you have the following lines as a subroutine in your program then after each call of it (by CALL 500) you would find that x% and y% hold the x and y co-ordinates – a number from 0 to 255, so that 0,0 is top left and 255,255 is bottom right; that leftb% is –1 if the left button only is down; that rightb% is –1 if the right button only is down; and that bothb% is –1 if both are down.

```
500 x%=INP(208) : y%=INP(209)
510 button%=INP(212)
520 leftb%=(button%=253)
530 rightb%=(button%=254)
540 bothb%=(button%=252)
550 RETURN
```

Then you could have a line in your program such as

```
100 CALL 500
110 PRINT "Cursor is at"; x%;y%
```

Off the scale

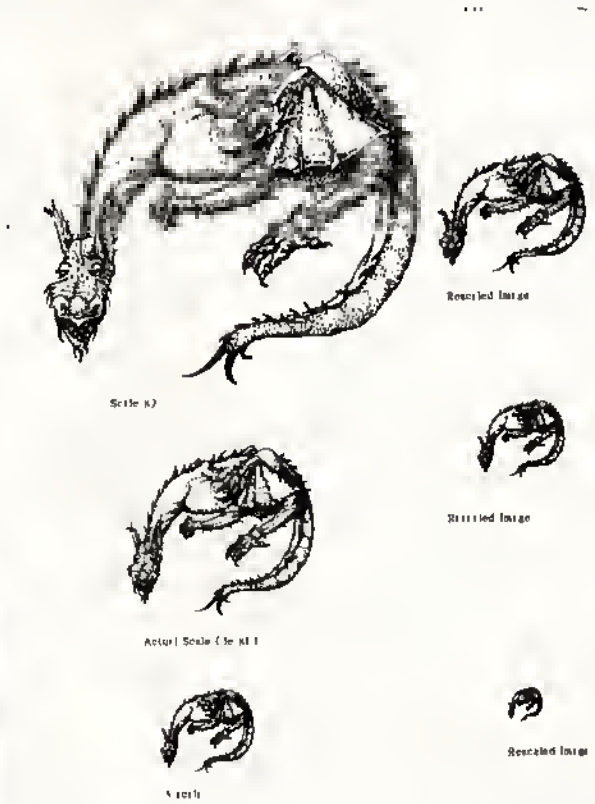
In January's Tipoffs you said it was not possible to rescale clip art in Micro Design. In fact it is possible.

When loading clip art there is an option (in the EXTRA keys menu at bottom right) to load it at half, normal or double size; multiples of this can be achieved by saving and reloading.

Also, on the design menu, selecting the 'Block... UNIT' option gives a pulldown menu which offers 'Rescale... f1'. if a box is drawn around the image, it can be rescaled to any size.

8000 Plus Thanks for that information. We should never have doubted a program as well thought-out as Micro Design!

Micro Design, not able to resize graphics? Nonsense! There's the 'rescale' option, halfway up to the right



Proof! Some printouts of Micro Design's dragon at different sizes, all achieved by using the inbuilt rescaling options in the program

Disc dilemma

How can I transfer data from a 706K disc on my PCW 9512 to a 173K disc on my PCW 8256?
S Bryant, Helston, Cornwall

8000 Plus Unfortunately you can't. All you can do is find a friend with a PCW8512. The top drive on that takes 173K discs and the bottom 706K discs, so that you can use it to copy from either to the other.

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Ministering the Portfolio

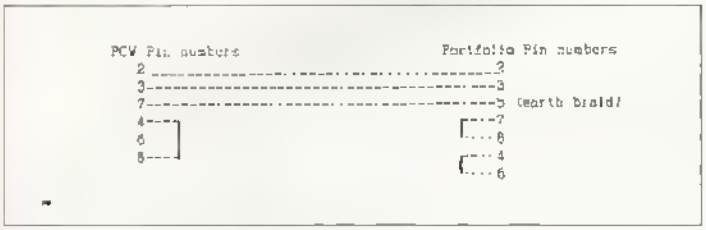
The information given in May's 8000 Plus on how to transfer files between an Atari Portfolio and PCW doesn't seem to work for me. Here's a suggested way of doing it. First follow the diagram here for pin connections.

Set the baud rate to 1200 for send and receive: this seems to be the maximum the systems will allow. Parity is none, eight bits, stop bits 1, Xoff.

It can be useful to create two .BAT files on the Atari, one for input and one for output. Unless the Portfolio sends the right end-of-file signal – [CTRL] Z – to the PCW, the file is not closed and cannot be saved: there seems no way to do this in the .BAT files however. There are no problems transfering from PCW to Portfolio.

IN.BAT contains
@cls
@echo File Input program
@if not exist %1 goto lab
@copy aux %1
:lab
While OUT.BAT contains
@cls
@echo file Output program
@if not exist %1 goto lab
@copy %1 aux
@cls
rem Now Type "echo > aux
[CTRL] Z
:lab

So, from DOS on the Portfolio, it is only necessary to type **In** or **Out** [SPACE] and name of file to send or receive, then when told to do so by that 'rem', insert the end-of-file signal [CTRL] Z.
J Chapple, Ashford, Kent



How to wire a PCW to a Portfolio, Atari's Pocket PC

In triplicate

In Tipoffs recently Ivan Swan wanted a simple way to print text simultaneously to file, screen and printer in BASIC. You gave a couple of solutions, but I think this closer to what he was looking for!

```
10 OPEN "O",1,"a:output.doc"
20 PRINT #1,"This message is
   being sent to screen, printer and
   also to a file called
   A:OUTPUT.DOC"
100 CLOSE
110 POKE 8792,205 : TYPE
   "A:OUTPUT.DOC" : POKE
   8792,195
```

This listing will display the message in line 20 to all three destinations. To make more text be displayed in this way, just have lots of lines like 20 between that and line 100.
Bertrand Whitehead, Buckingham

8000 Plus An elegant solution. If you have a PCW9512, replace both the 8792s in line 40 by 29161.

Sticky moments

Space problems on your desk can easily be solved by putting the PCW printer on top of the monitor – except that it keeps falling off.

To stop it doing that, just attach two two-inch strips of self adhesive velcro to the printer and monitor to keep them stuck together. It's simple to do and cheap!
Steve Garrill, Blackpool, Lanes

Running wild

It is quite possible to run a CP/M program from BASIC. Here's how to do it. Let's suppose that you want to run a program called ZAP.COM from within your BASIC listing. The following lines do the trick:

```
10 f$="zap"
20 for n=128 to 127+len (f$) :
   poke n,asc (mid$ (f$,n-127,1) )
30 next : poke n,0
40 memory 49999 : for n=0 to 6 :
   read d
50 poke n+50000, d : next
60 v = 50000 : call v
70 data 14,47,30,255,195,5,0
```

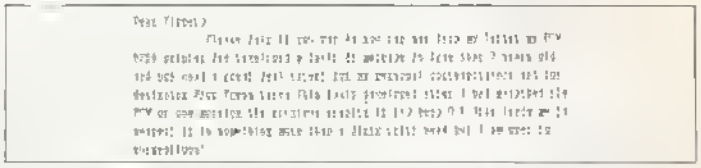
To call a program of another name, just change line 10. Note that f$ has the name of the program called in lower case and without .COM on the end.
Daniel Evans, Putney, London

Drop me a line

This fault developed after I switched on the PCW one morning. Please can you help!
Tony Lowe, Chard, Somerset

8000 Plus This effect can be caused by a faulty connection of the printer into the back of your PCW. Have a look at where the black plastic plug fits onto the pins in the slot marked 'Printer impresora'. If you take it off and see that some pins aren't connecting up (if they're bent, for example) then that could be causing it. Straighten them up with a screwdriver blade – with the PCW turned off, of course! – refit the black plastic printer plug, and then try again.

If the effect is still there afterwards you'll have to consult your local computer shop.



Fed up of reading between the lines? The cure for this could be simple

Hint?

Do you know of a program that will enable me to:
1) Make up and include graphic patterns, such as letter headings, in a LocoScript 2 document
2) Print out large-size headings in a LocoScript 2 document.

I know that a desktop publishing program would enable me to do print out the patterns/headings on a sheet of paper first, onto which I could print a LocoScript document – but I'd much rather be able to do it all from LocoScript!
K O'Riley, London SE5

8000 Plus No to both. It must be technically possible, and I would have thought anyone who ran work out exactly how to do it would then have a nice little niche market on their hands.

The difficulty is cracking the rather involved nature of LocoScript document structures to know how to include the complex printer instructions needed, and obviously the people who know that best are makers Locomotive themselves. Maybe they're considering it already: we really don't know.

Two into one....

I want to use LocoScript 2 from my PCW9512 on my PCW8512. I've tried copying the LocoScript startup disc onto one formatted for my 8512's A drive, but I get an error message. Do you know a way to make it work?
T Hall, Swansea

8000 Plus When you buy a piece of software, the licence often demands that you run only use it on one machine. (Technically, you're breaking the law if you have two 8512s and use the same copy of LocoScript 2 on both). So, even though you have LocoScript 2 on your 9512, you have to buy another copy for your 8512 – which is precisely why makers Locomotive made sure the program wouldn't work on the 8512! I don't think there would be any excuse for us publishing a way to make the 9512 version work on an 8512 even if we knew how. Fortunately LocoScript 2 is so inexpensive that you can buy another copy out of petty cash.

Transfer request

Readers with PCs and PCWs who transfer files between them may be interested to know that the two machines are more compatible than is often thought.
1. dBase 3, FoxBase and Smart2 on the PC can use PCW dBase2 database files without amendment.
2. SuperCalc4 on the PC can use PCW SuperCalc2 files without amendment.
3. LocoScript PC can use PCW LocoScript 1 or 2 files without amendment.
4. Protext files work fine in Protext on either machine.
Jim Mackay, Knutsford, Cheshire

8000 Plus File transfer between PCs and PCWs is a tricky business. One of the easiest and most effective ways is to buy a PC style drive for the PCW (5 $\frac{1}{2}$ or 3 $\frac{1}{2}$ inch) and then use Moonstone's 2in1 software to copy from one to the other. Contrary to what you might have read elsewhere, PIP or NEWSWEEP won't do it! Moonstone are on 041-941 3120.

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THE GOOD Software FILE

These pages provide a comprehensive guide to the Amstrad PCW software. Published in three monthly parts, this time it's the turn of Databases, Educational Software, Communications and Programming Languages. We've set out to cover every important piece of software we could lay our hands on, and to give you enough information to decide whether they are suitable for you.

All software will run on both the 9512 and the 8000 series machines, though the former's daisywheel printer cannot print graphical output.

The selection isn't comprehensive, but the software listed here represents what we think is the best of that currently available.

As well as a brief summary of what they do, the main Plus and Minus points for each program are listed – Pluses have a ▲ by them, Minuses a ▼.

Those we think are particularly noteworthy have a corner flash. Have fun window shopping!

DATABASES

There are broadly two different types of database, and which suits you best depends, of course, on what you want it for.

Firstly there's the simple card index substitute. For many home users, this will be the kind of thing you want – all it does is store your address book or stock items so that you can easily look them up.

A more sophisticated option is the programmable database. With these, in addition to allowing simple card index retrieval there is a command language which allows you to analyse the data on the cards. For example, you could automatically add up the money owed to you by all your customers from Yorkshire. To make best use of this kind of facility, you will need to be able to understand a little programming, although it's not too hard really.

A bit of jargon now. A database is said to consist of records – this is just like a card in a conventional card file, with all someone's details on it. Each record is composed of fields – a field is a single entry on a card, like someone's name, or age, or postcode.

The thing that makes a database special is an index. You might be able to hold your address book as a simple list in a word processor document, but if it gets large then this becomes unwieldy. An index means that the database has worked out which order records should be in, so it can go straight to the one you want without looking at lots of others first.

The field that you use as your index (e.g. someone's surname) is said to be a key field, and can be looked up very fast compared to "non-key" fields. A good database will allow multiple keys, meaning that it can look up data just as fast for a variety of types of information.

MASTERFILE 8000

£49.95 • Campbell Systems • 0378 777623

A specially written PCW version of the successful database sold on other Amstrad computers. It is fully menu controlled, and makes good use of the PCWs special screen and keys. It can deal with up to 8 separate data files at once, so can cope with relational databases. Screen (but not printed output) can be elaborately laid out with boxes, lines etc.

PLUSES • MINUSES

- ▲ Works fast
- ▲ Wide range of layout options
- ▲ Handles 'relational' files
- ▲ Plenty of good example files
- ▲ Can do arithmetic calculations within its records
- ▼ Capacity limited by size of M drive – best on an 8512
- ▼ Takes a while to learn all the features

CAMBASE II

£60 + VAT • Cambrian Software • 0766 831878

New version of the old favourite PCW database. Most important change is the Copy Filespec facility. You can set up a new database with potentially more entries than you've made provision for using the information from the original database. You can also change the fields to suit another set-up.

PLUSES • MINUSES

- ▲ Quick and efficient to use
- ▲ You can set up a database blueprint (Filespec) which you can test thoroughly before entering data
- ▲ Includes powerful features like conditionals, loops, field validation, and specified layouts
- ▲ Simple parts of the program are well covered in the manual
- ▼ Can't use the memory bad news for 8256 users
- ▼ You have to guess how to use the more advanced features
- ▼ Not much room for prompts
- ▼ Tendency to crash occasionally in Filespec

LOCOFILE

£29.95 • Locomotive • 0306 740606

The indexed pop-up database that runs from within LocoScript 2 and that goes even further toward turning LocoScript 2 into a completely integrated software package. Unlike most databases empty records take up almost no space on disc. This allows large record cards to be defined even if they won't always be used. Records pop up very quickly without having to exit from your document. Works best when used in conjunction with LocoMail.

PLUSES • MINUSES

- ▲ Very easy to use
- ▲ Unusually efficient use of disc space
- ▲ Can alter existing index - a very powerful feature indeed
- ▲ Automatically upgrades your LocoScript, LocoMail and LocoSpell to version 2.2
- ▲ Sample databases help you get a better feel for the program
- ▲ Very flexible when designed the record format
- ▲ Carries out searches on partial strings - ideal for when dealing with incomplete information

CHIBASE 3.0

£29.95 • Chiasma • 06333 60996

The updated version of the 'free format' database. You type in the text, mark the words to be indexed and treat the file as a database. The updated version allows you to import and export ASCII data files and a chain delete option enables you to work your way methodically through the database deleting the records you don't want while keeping those that you do.

PLUSES • MINUSES

- ▲ Good amend, sort and recall features
- ▲ You can edit without a word processor
- ▲ Searches quickly through data
- ▲ Great for storing large amounts of data where the subject matter is variable
- ▲ Useful record template
- ▼ Can't run from M drive

DATASTORE II

£39.95 • Digita International • 0395 270273

Ideal for the novice, Datastore II allows you to remove the tedium from filing, updating and organising information, 32000 records, 32 fields, fast 'search' facility. Function keys can have phrases assigned to them. Good for uses where the emphasis is on printed output.

PLUSES • MINUSES

- ▲ Flexible range of print commands
- ▲ Simple to use
- ▲ Calculation facilities
- ▼ Need to preset maximum no. of records before you start
- ▼ Slow at browsing through

DELTA

£99.99 • Compsoft • 0483 425925

Delta is another of the heavyweights, like dBase II and Condor, but unlike them is fully menu driven. Although the screen layouts are fully flexible, there is a default "quick" layout so you don't have to sweat at defining your own. It could use better record indexing facilities. Particularly good for writing applications, once you have ploughed through the large manual.

PLUSES • MINUSES

- ▲ Records can contain up to 90 fields, plus groups of fields that may be repeated
- ▲ Screen layout can be user defined, or "quick" mode used
- ▲ Single page letter writer provides detailed mail merge
- ▲ Processes can be defined, and run from user defined menus, for ease of use by others
- ▲ Very full, and quite readable, manual
- ▼ Only one field may be used for indexing
- ▼ Very big program – a PCW8256 would be hard pushed
- ▼ Some of the menu operations are unforgiving to errors

MINI OFFICE PROFESSIONAL

£39.95 • Database Software • 0625 859444

The Mini Office database retains its original format. It's a pretty standard card index type, similar to First Base. Good range of selection operations and arithmetic on fields. Can sort over a combination of fields and print out a variety of smart layouts, and you can have up to 255 fields.

PLUSES • MINUSES

- ▲ Easy to use and intuitive
- ▲ Can use the data in the word processor
- ▲ Powerful selection and sort facilities

▲ Arithmetic on fields
▲ Test print facility lets you check your labels will print okay
▲ One command makes global changes

POCKET INFOSTAR

£69.50 • MicroProDRA • 0386 841181

Consists of two large programs, DataStar and ReportStar (both available independently). DataStar is a conventional database, with screen card layout and indexing. ReportStar then generates the printed output, either from DataStar or CalcStar files. Powerful if you can use them, but the suite is horrifically overcomplicated, and the documentation just incomprehensible.

PLUSES • MINUSES
▲ DataStar is a quite good database with indexing and calculated fields.
▲ "Transaction processing" feature allows cross referencing of data files.
▲ Can be integrated with other Pocket products, eg WordStar.
▲ Can take up to 255 fields per record
▼ Two volume manual set is very badly organised.
▼ There are separate programs to run for form design, data entry and reporting.
▼ Operation is all by obscure command keys, a la WordStar.

DBASE II

£56.35 (retail price) • Centresoft • 021 625 3399

The WordStar of database packages. Recently licensed "cheaply" for Amstrad machines, dBase II is a market leader in business computing. As you would expect, this means it is very powerful but very complex. It has a procedure language to allow you to write programs to manipulate the data, and you can construct index files for really fast access to large databases. If you can make the effort to learn it, it'll serve you well.

PLUSES • MINUSES
▲ Powerful command language for customised programs
▲ Indexing facility makes large databases fast to handle
▲ Can handle very big databases
▲ The data can be fairly easily altered after its entry
▼ Manual is daunting (but there are plenty of independent books on the market)
▼ Can't easily alter the screen record layout
▼ For an expensive package, you still only get 32 fields per record
▼ Generally unfriendly unless you have some programming skills

FIRST BASE

£29.95 • Minerva • 0392 437756

Billed as a simple database for the first time user, First Base is quite a competent cheap card index. The manual is computer printed, and week on diagrams which doesn't help things. One weakness is getting printed results out of First Base – either you settle for crude lists, or you have to create a template in LocoScript which is awkward to do. But overall, it's pretty good value for money.

PLUSES • MINUSES
▲ Can alter the index field at any time
▲ Simple to use screen editing make data entry easy
▲ Good value as a simple card index lookup system
▲ Can easily browse through the database picking out a set by hand
▼ Manual is badly laid out and generally difficult
▼ Producing printed output is awkward

POPULAR RETRIEVE

£61 + VAT • Sagesoft • 091 2131555

A high-power package that is relatively easy to use with password security if desired, calculations, automatic counting or deletion of sets of records satisfying given conditions. It also has sophisticated sort and select commands, and can change the structure of an existing database. All this is done by a set of commands rather like a programming language. Printed formats are rather limited though and the program insists on using both drives, making use on an 8256 impractical.

PLUSES • MINUSES
▲ Easy to use for a powerful package
▲ Advanced sorting and selection commands
▲ Subsets can be written to files
▲ Can count or delete subsets with one command
▲ Labelling/mailmerging routines included
▲ Can change structure of existing database
▼ Impossibly big program for 8256
▼ Printed output limited – must use mailmerge

SCRIPT2BASE/TEXT2BASE

£29.95 each • Encyclosoft • 0270 811890

Two free-form databases to be used with LocoScript and Protext respectively. Complete rewrites of FT=DB, the beauty of these databases is that you first create all your text on the word processor and import it as an ordinary (non-ASCII) text file into the database. You then mark all the words you want to see indexed as keywords so that you can go on to compile indexes and carry out searches.

PLUSES • MINUSES
▲ Very easy to use
▲ Allows you to organise your collection of discs like an encyclopaedia
▲ Can construct new files made up of selected parts of existing ones
▲ Can send any part of a document to the printer on a line-by-line basis
▼ No text-editing facilities within the databases themselves
▼ Dreadful documentation

SMARTCARD

£80 + VAT • Pecon Software • 0272 425012

A conventional card index database which is now the nearest thing available to Cardbox. Smell and fast, you can sort the records, index up to three fields and do simple arithmetic in fields. Can't put background text (eg. titles) on records or printouts.

PLUSES • MINUSES
▲ Good clear screens
▲ Plenty of on screen help
▲ Fast and high capacity
▲ Easy to use
▼ Can't put background text on printed reports
▼ No way of exporting data for mailmerge

MICROFILE (SOLD IN THE MICRO COLLECTION)

£49.95 • Saxon Computing • 0964 550697

Microfile is a well implemented simple database, driven by plenty of menus and on-screen prompts. It's fast and has good screen control, although it has some size restrictions. Microfile comes as part of a software suite, 'The Micro Collection', which is good value (Microfile, Microwrite, MicroSpread, Flexilabel and Lock-It)

PLUSES • MINUSES
▲ The price includes competent word processing, spread sheet, labelling and encryption programs
▲ Plenty of menus and on screen prompting
▲ Very flexible formatting for screen layout and printing
▲ Numeric fields can be expressions to be calculated
▲ Indexing is fast and can be on several fields
▼ Maximum number of fields per record is only 20
▼ Limited facilities for totalling up fields in a database

EDUCATIONAL

Educational Software is designed as an aid to traditional teaching, not an alternative. Its main use is in re-inforcing traditional learning done elsewhere and providing the stimulus of a different approach. It can also be especially useful in rote learning and improving the speed at which problems are solved.

BUSINESS FRENCH (GERMAN/ITALIAN/SPANISH)

£49.95 each • Apex Computing Services • 0273 727477

Four language learning packages which enable the Euro-conscious professional to get to grips with commercial jargon in another tongue. Areas covered are business, technical, travel, restaurants, communications and social - all with seperate sub-sections to ensure that every eventuality is covered. A basic knowledge of the language concerned is, however, essential.

PLUSES • MINUSES
▲ Fun and easy to use
▲ Comprehensive range of vocabulary
▼ Program needs cassettes to be really good
▼ Some poor screen displays

IANKEY CRASH COURSE

£24.95 • Ionsyst • 071 607 0187

A fairly traditional typing tutor, taking you through basic keyboard exercises. There's a lot of explanatory text, which gets in the way second time around. Definitely competent, but a bit boring.

PLUSES • MINUSES
▲ Mostly avoids boring letter drills
▲ Very full on-screen information guides you along
▲ 'Fast' option cuts out some text if it gets repetitive
▼ Not particularly imaginative use of graphics
▼ It doesn't always ensure that the cursor is properly aligned with the exercise text

2 FINGERS TOUCH TYPING

£24.95 • Ionsyst • 071 607 0187

Despite its provocative name, a useful typing tutor in that it specifically caters for people who can already get by on keyboards with two fingers. You are gradually introduced to touch typing, so your speed doesn't drop while you learn. Fills a necessary slot in the Typing Tutor market.

PLUSES • MINUSES
▲ Suitable for improving two finger typists without much drop in speed
▲ Full on screen instructions
▲ Exercise material is interesting text, not letter drills
▼ Explanation text is annoyingly verbose in some lessons
▼ It doesn't always ensure that the cursor is properly aligned with the exercise text

GIANTKILLER

£17.35 + VAT • Topologika • 0733 244682

A mathematics adventure game loosely based on Jack and the Beanstalk. Lots of intriguing puzzles which should stimulate any student up to GCSE standard. Not the best adventure game ever written but great for making mathematics fun!

PLUSES • MINUSES
▲ Puzzles plausibly integrated into scenario
▲ Progression of game is simple and well defined
▲ Puzzles introduce a lot of valid mathematics
▼ Program understands only very simple commands
▼ Saving a position takes a move – can be fatal
▼ Won't be of particular help in exams

ANIMAL/VEGETABLE/MINERAL WORLD WISE

£14.95 • Bourne Educational • 0794 523301

Aimed at the younger market, 7-15 year olds. Both these programs work by learning as the child uses them. Think of an object and the computer tries to guess it. If it is wrong, the child is asked for a question which would allow the PCW to be right next time, and it learns.

PLUSES • MINUSES
▲ Can be used as many times as the child's imagination holds out
▲ Performance can be analysed by a teacher after a session
▲ As you build up a base of objects and questions, they can be saved for reuse
▼ It needs a lot of typing, hence a lot of supervision
▼ The PCW starts with only two objects known, so it takes time to get going
▼ Documentation has hardly been altered from cassette based versions
▼ Since it is for young children, more imaginative use of the screen would be nice

BETTER SPELLING

£16.95 • School Software Ltd • 010 353 61 45399

This is a spelling course aimed at the 8 to adult age group. It consists of a series of well organised, short lessons each dealing with one topic, like plurals or which version of there/their/they're to use in a sentence. The use of the PCW screen is rather unimaginative, and doesn't hold your attention.

PLUSES • MINUSES
▲ Well thought out lessons to emphasise particular points
▲ Teaches words in a sentence context as well as in isolation
▲ Lessons can be picked in any order from a menu
▲ Seems to be proof against mischievous key pressing
▼ Boring use of the screen doesn't grab interest
▼ No instructions come as to how to use the program.

CHEMISTRY/BIOLOGY/PHYSICS

£22.95 each • School Software • 010 353 61 45399

It's never been easier to use an alternative printer with your PCW...

LocoScript 2 together with the new **Printer Support Pack** means better quality and faster printing from your PCW.

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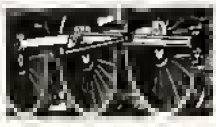
Whether you are using a PCW 9512, 8512 or 8256, the **Printer Support Pack** (£29.95) gives you everything you need to get the best out of your alternative printer.

To find out more about LocoScript 2 and the **Printer Support Pack**, phone Katy Buchan on: (0306) 740606.



LOCOMOTIVE SOFTWARE
Dorking, Surrey.
RH4 1YL

These two are fairly traditional question-and-answer tests. You are faced with a choice of 10 topics, and then asked 10 or so questions each, where you have to fill in the blank in a statement. There are preamble notes beforehand, and if you get it wrong you are given a clue. Aimed at 12-16 year olds.

PLUSES • MINUSES
- ▲ Questions would challenge a GCSE pupil well
- ▲ Preamble notes introduce topics
- ▼ The fill in the blank questioning style has little flexibility for different answers
- ▼ No option to add questions for a specialised syllabus
- ▼ Some careless errors, like incorrect facts and hard to decipher chemical formulae

MICRO MATHS

£24.99 • LCL • 0491 579345

Supposedly covering 8 to adult ages, this seems an O-level type program, covering topics from calculus to tables. A good implementation on the PCW with proper use of the screen. Questions are picked at random from a pool, so may repeat but never run out. Replies to questions are typed in mathematical notation, like X^2+3

PLUSES • MINUSES
- ▲ You can pause to use BASIC as a calculator while you think
- ▲ 'Unlimited' question set
- ▲ Comes with a 'free' book of AEB O level questions
- ▲ Good hints and explanations
- ▼ Questions in a topic repeat occasionally
- ▼ Some frills, like the clock and beeper, are annoying
- ▼ No flexibility to add questions for a particular syllabus

AMSTAT 1,2,3,4,6 AND 7

£28 - £40 • SC Coleman Ltd • 0530 415919

A suite of six statistical routines including a business analysis program, forecasting and resource management. Individual prices range from £27.95 to £39.95. Very sophisticated, and perhaps because of that, a little awkward for beginners.

PLUSES • MINUSES
- ▲ Good range of statistical functions
- ▲ Good manual
- ▲ Can produce good quality graphical results
- ▼ Some editing procedures very long winded
- ▼ Needs some expertise to use properly
- ▼ Weak on checking that input data is reasonable.

ULTIMATE QUIZ

£14.95 • David Greenhough Computing • 0274 636475

An educational aid for school age children. Two quizzes on a multiple choice format are available on the one disc - one on general knowledge and one on the Highway Code. You can play against a timer and can set the level of difficulty.

PLUSES • MINUSES
- ▲ Optional noughts and crosses game included with either quiz
- ▲ Incorporates an editing file for easy updating of questions
- ▲ It's very versatile - up to 8 people can play
- ▲ None of the questions are repeated
- ▼ Some of the questions are a little esoteric

CROSSGRID

£14.95 • David Greenhough Computing • 0274 636475

"Crossword puzzles without clues" is how the packaging describes this program. Instead, a grid of numbers is presented to the player, each number representing a letter. The skill is to analyse the possible combinations and produce words. Various levels of difficulty mean that it is suitable for all ages - although some of the words, even in the lower levels ,can be rather advanced.

PLUSES MINUSES
- ▲ Easy to install
- ▲ Variety of challenge levels
- ▲ Ideal for lateral thinkers
- ▲ Totally addictive
- ▼ No competitive element
- ▼ Some very obscure words

SUPERMATHS

£16.95 • Abacus Software • 0689 83629

Specifically designed for the PCW, this program exercises basic numeracy skills in children. Questions are asked in quick fire volleys of ten and cover all four operations (addition, subtraction, multiplication and so on). Scores are automatically recorded.

PLUSES • MINUSES
- ▲ Special original Test and Worksheet modes included the latter is ideal for teachers
- ▲ Very efficient scoring method
- ▲ Numeracy level is very basic
- ▲ New version has enhanced screen displays
- ▼ Some of the questions may start to look familiar after a while

LANGUAGE TUTORS

£19.95 each • Kosmos Software • 05255 394/5406

Four programs with identical formats to help you learn French, Italian, Spanish and German. They can be used just as effectively by students of those languages learning English too. Very versatile serfas of programs and useful adjuncts to conventional language learning.

PLUSES • MINUSES
- ▲ Can edit the lessons yourself to include new words
- ▲ Useful self test option
- ▲ Completely bi lingual packages
- ▼ Purely for vocabulary learning no grammar lessons
- ▼ Would have been more useful if they had also included audio cassettes

MATHS MANIA

£16.95 • School Software Ltd • 010 353 61 45399

For children between the ages of 8 and 12, this program offers 5 levels of difficulty in multiplication and 2 in division. A very good program for exercising basic numeracy skills and for practising some mental arithmetic.

PLUSES • MINUSES
- ▲ Program provides a chirpy feedback on the score of the user
- ▲ Large attractive numbers appear on the screen
- ▼ Surprisingly enough, no addition or subtraction exercises are provided
- ▼ Screens could be made more visually exciting for the younger users

BETTER MATHS

£16.95 • School Software Ltd • 010 353 61 45399

A continuation of Maths Mania for the next age group 12 to 16 year olds. Topics are very varied and cover, among others, statistics, simple interest and algebra. Each topic consists of a series of ten multiple choice questions. At the end of each set, the percentage scored is shown.

PLUSES • MINUSES
- ▲ Realistic level of difficulty practised
- ▲ Program makes a first class revision aid

FUN SCHOOL 3

£24.99 • Database Software • 0625 859444

A disc for the under-5s. Fun School 3 comprises six games which aim to improve the basics of early education - counting, matching and recognising letters, and so on. The main character is a teddy bear, and his rewards for your good work means that he gains a new house, eats ice cream and fills the coffers of his piggy bank.

PLUSES • MINUSES
- ▲ Program has excellent and delightful graphics
- ▲ The basic ideas are original
- ▲ It is of genuine educational value
- ▼ The disc is rather slow to load

JUNIOR PLAYTIME

£14.95 • David Greenhough Computing • 0274 636475

A set of ten educational games for the four to eight-year-old range. Not school work brought home and made fun, though - this is more a test of general ability than general knowledge. Games include matching pairs of words, guessing numbers and a Maze puzzle.

PLUSES • MINUSES
- ▲ Plenty of games to choose from
- ▲ Very easy to use
- ▲ Can "edit" certain parts of the package
- ▲ Includes a score sheet option
- ▲ The graphics are excellent
- ▼ Some games possibly more fun than educational
- ▼ No documentation

SCHOOL'S OUT

£14.95 • David Greenhough Computing • 0274 636475

Not so much "out" as nowhere to be seen. The sequel to Junior Playtime, aimed at sevens to fourteens, the five games on this disc are definitely more games than "tests". But they do include some of the intellectual "gaals", such as Reversi, (Othello), Hangmen and Four In a Row (Connect 4), which will stimulate thought and reasoning rather than simple reaction.

PLUSES • MINUSES
- ▲ Good selection of games
- ▲ Four or five difficulty levels for each game
- ▲ Good use of graphics
- ▲ Challenging and fun
- ▼ Documentation is on the disc rather than hard copy...
- ▼ ...and is not very clear anyway

YES CHANCELLOR!

£17.35 + VAT • Topological • 0733 244682

Well! Don't skip over Yes Chancellor! because it calls itself an "economic simulation" program. Instructive and fun to use, you type in your annual budgets(tax rates, public spending, etc.) and see your popularity plummet and the economy crash. Great for economics classes, also an amusing game in itself.

PLUSES • MINUSES
- ▲ Simple but effective model of the economy
- ▲ Comes with booklet explaining economic principles
- ▲ Great for teaching economic and political pragmatism
- ▼ Can get boring as a game
- ▼ You can't adjust the model of the economy, so it can be too simple

COMMUNICATIONS

Communications is one of the glittering areas of computing, gurus would have you believe. It can provide a fascinating hobby for 'hackers', but more importantly it is a valuable business tool.

'Electronic mail' is just what it says: you use your PCW to send messages, which can be documents thousands of words long, to others on the electronic mail system. The best known system of this kind is Telecom Gold, which also allows you to send telexes. Another major system is Prestel, which is more of an information provider – you can read share prices, weather information and other news direct from your phone line.

For any professional service, you pay a registration fee, plus a connection charge – typically around 10p per minute you use the system. Of course, your phone bills are extra. For hobbyists there are also 'Bulletin boards', which are effectively a kind of private electronic mail system run by a system operator (a 'sysop' to those in the know).

To use any service, you will need to buy a modem and an interface. A modem allows you to send computer signals down a phone line, and the interface gets the signals from your PCW to your modem. The pair will set you back £200 or more. Once done, you need some software to allow you to send and receive data, and it is this software reviewed below.

Electronic mail services just send strings of characters to and fro, whereas Prestel is a 'Viewdata' system, meaning it sends pictures and graphics too. Software needs to do more to receive Viewdata graphics, so if you want to use Prestel make sure your software is up to it.

8256UKM7.COM

Public domain (ie. free!)

P.D. software documentation is often poor but this program has an above average document file. UKM7 was written to support ASCII file transfers using error correction and as a dumb terminal either for use over the phone or between two Amstrads. Between two PCW's file transfer is possible at a staggering 31,250 baud which is even faster than PIP! Easy to use for beginners and better than KERMIT, UKM7 provides a cheap and excellent way to communications after you've got fed up with the PCW's MAIL232. 8256UKM7 is available from the Public Domain Special Interest Group, or most bulletin boards supporting the PCW machines.

PLUSES • MINUSES
- ▲ Cheap! (the price of a phone call)
- ▲ Easy to use, and helpful menus
- ▼ Modem7 version of Xmodem error checking supported
- ▼ Single file and Batch Mode transfers
- ▼ "Quiet" mode for slightly faster transfers (on-line transfer progress report disabled)

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POOLS PLANNER by the same author. Full details given of 369 easily entered block perms ranging from 9 to 73960 lines and from 12 to 56 selections. All are accepted by the pools firms and are checked in seconds by your computer.

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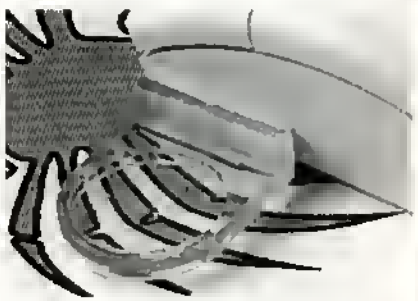

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▼ Only ASCII, no Viewdata
▼ You need to find a PD software source (eg. use a modem and MAIL232 software)

MINI OFFICE PROFESSIONAL

£39.95 • Database Software • 0625 859444

The comms package is as comprehensive as anything else on the market. It can display both ordinary text screens and the 'Viewdata' block graphics used by Prestel. You are offered baud rates from 75 to 9600, separately set for transmit and receive, straight terminal emulation for use with Telecom Gold, and XMODEM and KERMIT file transfer protocols for error-proof transfer of long files. Would be well worth the money just by itself – and of course you're getting four other very good programs as well.

PLUSES • MINUSES
▲ Very comprehensive – a genuinely useful comms package
▲ Ordinary text and 'Viewdata' block graphics
▲ Can save setups under names and recall them, so you only need work out your baud rates/parities once
▲ You can set keys to return strings, such as Telecom Gold passwords
▲ Comes preconfigured to use Prestel and Telecom Gold

CHITCHAT E-MAIL/ VIEWDATA/COMBO

Sagesoft • £69.99/£69.99/£99.99 • 091 284 7077

Two communications programs for the 8000 series machines that have been around for a good time now. Most of the features you will need are here: message text editor, preprogramming unattended tasks(if you use a suitable "intelligent" modem), directory of stored numbers, copy to printer, and a very useful connect time clock so you can watch your phone bill climb! E-mail is used for simple text phone links like Telecom Gold, whereas you'll need Viewdata if you want to use Prestel. The Combo pack contains both E-mail and Viewdata.

PLUSES • MINUSES
▲ Good, clear documentation
▲ Easy for first timers to use
▲ Built in text editor for pre-sending message preparation
▲ Pre-definable tasks executable at any preset time if unattended.
▼ No error corrected file transfer (i.e. Xmodem or CRC)

DIALUP

£72.40• PMS Communications • 021-643 7688

Offers both E-mail and Viewdata operations. Very easy to use, and offers an XMODEM transfer protocol unlike Sage ChitChat. If you are buying a modem too there are some cut-price bundled deals to be had, eg. the Miracle Technology WS4000 modem.

PLUSES • MINUSES
▲ Simple to use
▲ Comprehensive file transfer commands, including XMODEM and the increasingly popular KERMIT
▲ Runs from the M drive
▼ Manual is not PCW specific, and the references to 5.25" discs are tedious

PROGRAMMING

Programming languages come as either 'compilers' or 'interpreters' – compilers pre process the program into machine code, so are much faster. The PCW's standard Mallard BASIC and LOGO are both interpreters. Compilers are generally more cumbersome to use than interprefers, but have various benefits for serious programmers.

If you use a specialised programming language and have any comments that would help us compile a good software file entry for it, we would be pleased to hear from you.

BASIC NEEDS

£9.95 (£5 to RNLI) • Luxlan Software • 0726 850820

A BASIC bundle for programming bulls, which requires a small amount of foreknowledge to operate. Consists of five files that can be run under Mallard BASIC, including FRED, the FriendlyText Editor, which is an extremely agile and versatile file editor and program editor. Basic Needs is excellent value for money.

PLUSES • MINUSES
▲ Uses of LocoScript keys
▲ Easy to use
▲ Loads of features
▼ Documentation poor

HISOFT C

£49.95• HiSoft • 0525 718181

A very good C compiler, fast, produces good compact code. It comes complete with the HiSoft integrated text editor ED80.

PLUSES • MINUSES
▲ Compiles program into ordinary CPM .COM file
▲ Produces compact code
▲ Fast and inexpensive
▲ Comes with integrated text editor
▼ No floating point arithmetic

ARNOR C

£49.95 • Arnor • 0733 68909

Good compiler with floating point arithmetic, but not as fast or as cheap as HiSoft C.

PLUSES • MINUSES
▲ Excellent integrated text editor
▲ Floating point arithmetic
▼ Cumbersome to produce .COM files, needs special run time support program
▼ HiSoft C is faster and cheaper

MIX C

£33.95 • Advantage • 0242 224340

American C compiler. A fuller package, including text editor, graphics and tutorial comes at £49.95. Also machine code assembler and examples, available seperately for £8.95 each.

PLUSES • MINUSES
▲ Features an excellent C tutorial
▲ Comprehensive implementation and massive manual
▼ Not for the newcomer to programming

PASCAL 80

£49.95 • Hisoft • 0525 718181

A standard full Pascal compiler that produces compact code. Comes with the ED80 text editor and a stand alone programmers editor.

PLUSES • MINUSES
▲ Well integrated text editor – when you hit a compilation error you are returned to the correct point to edit it
▲ Short compilation time, economical on memory
▼ Manual makes no attempt to teach you Pascal

HISOFT FORTH

£19.95 • Hisoft • 0525 718181

Forth is an unusual language, somewhere between assembler and C. This is one of the few compilers available for the PCW.

PLUSES • MINUSES
▲ Comes with a Forth editor
▲ Quick and efficient implementation
▼ Manual doesn't teach you Forth

THE VICAR

£29.95• Iansyst • 071-607 5844

A programming tool for serious programmers. If you have a several-hundred line program held in several files on a disc, you can lose track of which variables are used where. The VICAR produces a concordance listing and other diagnostics, to help you find bugs and maintain the program.

PLUSES • MINUSES
▲ Easy to use but still flexible through use of options
▲ Amstrad versions all at a special low price
▲ Good manual
▼ Only of value on large programs
▼ Limited value to most PCW users (except BASIC bulls)

ALL YOU EVER ...

£29.95 • CP Software • 0993 823463

Program is ridiculously entitled All You Ever Wanted To Know About Graphics, the Universe and Everything on the PCW 8256/8512 but were Afraid to Ask. It's for the experienced programmer who needs fast, smoothly flowing and professional looking graphics output. It has a library of machine code routines which you can use in any language from Mallard Basic to machine code.

PLUSES • MINUSES
▲ You can produce professional standard graphics
▲ Demo programs included on the disc
▲ Routines are very wide ranging
▲ Excellent value for money
▲ New routines of latest version concerned with printer control
▼ Not recommended for beginners
▼ Cumbersome to use from Basic

DEVPAC 80 MKII

£49.95 Hisoft 0525 718181

Version 2 of the PCW hacker's first choice of development system. Substantially upgraded from the original with a new quite powerful debugger, and a Mini Officestyle main menu from which to run the individual utilities or your own finished programs.

PLUSES • MINUSES
▲ Powerful assembler producing REL or COM files
▲ Good hex facility for Basic programmers
▼ Text editor antiquated and clumsy
▼ Weak monitor

MAXAM II

£49.95 • Arnor • 0733 68909

CP/M machine code development system incorporating an editor, assembler and monitor. It will allow you to disassemble any of the memory banks including extra memory on M drive.

PLUSES • MINUSES
▲ Very versatile assembly language programming environment
▲ Flexible monitor capable of bank switching, conditional breakpoints and symbolic debugging
▲ Tailored to meet all CP/M Plus programming requirements
▲ Program can't cope with some undocumented Z80 instructions
▲ Program assumes basic familiarity with the Z80 assembly language

MODULA 2

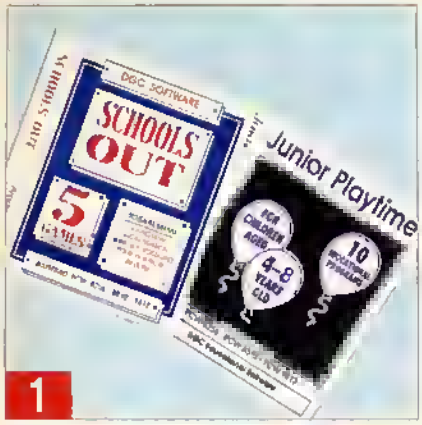
£54.95• Hisoft • 0525 718181

A compiler. Modula-2 is the successor to Pascal, good for large programs requiring seperate compilation, complete with text editor.

PLUSES • MINUSES
▲ Full implementation with extensions.
▲ Includes libraries of predefined modules
▲ WordStar type screen editor included
▼ Compilation process is longwinded and not for beginners

NEXT MONTH

The guide continues with the categories of SPREADSHEETS GRAPHICS and GAMES. The month after will cover WORD PROCESSORS, ACCOUNTS, UTILITIES and DTP, and the month after that it's back to this month's topics. Our intention is to keep publishing the three parts of the guide in rotation, updating it each month to include all new products. If you would like to see other sections of the guide, back issues of 8000 Plus are available at £1.75 each. Meanwhile, if you are aware of any significant errors or omissions in the file as published, please let us know. We intend to maintain it as THE authoritative guide to PCW software.



SCHOOLS OUT/JUNIOR PLAYTIME

Two games from DGC Software . Schools Out comprises Hangman, Wordsearch, Junior Crossgrid, Four in a Row and Reversi for the 7-14 year old. Junior Playtime has 10 fun games for the 4-8 year old.
8000+Value Verdict 17/20
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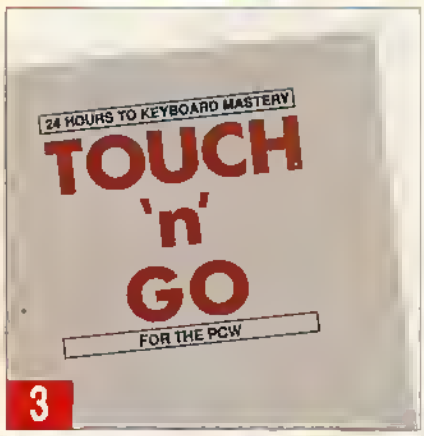

TOUCH AND GO

Touch and Go, recently reviewed in issue 47, is a no-frills, no-nonsense package that should speed up the most ham-fisted of typists.
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OUR PRICE £14.95.
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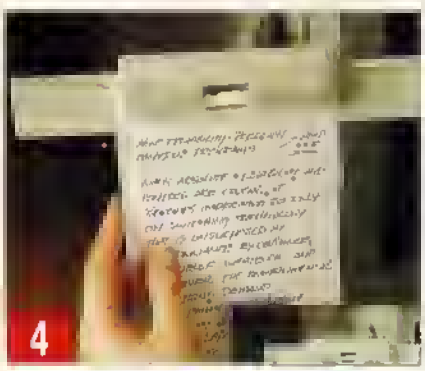

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We are giving away a free pack of highlighter pens with this offer.
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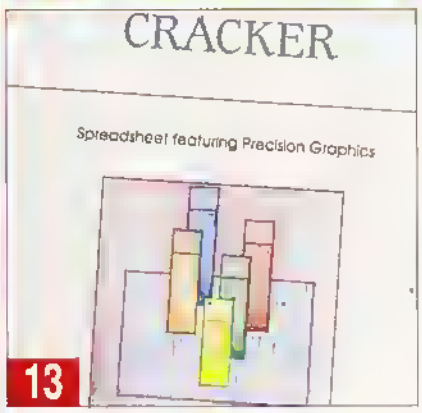
5.25 INCH DISK DRIVE

This PACE disk drive is the answer to your incompatibility problems, and gives you the benefits of 800k disc capacity. It comes complete with TDOS which allows MSDOS or PCDOS data to be transferred to your PCW.
R.R.P. £189.99
OUR PRICE £145
order No. 8622

SAVE £45



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Postscript

Itching to say something? Well you've come to the right place!

This month's postbag brings a variety of comments - including the good, the bad, and the positively indifferent. We've got ribbon reposts, keyboard qualms, Cracker queries and much, much more! So, make yourself comfortable, and read on. Send your letters to Postscript, 8000 Plus, 30 Monmouth Street, Bath BA1 2BW. We cannot, unfortunately, reply to all correspondence personally.

2 in 1

We feel we must respond to the quite appalling review given to Version 2 of our 2 in 1 software for PCW.
As a major PCW software developer and advertiser, we do not expect any editorial favours or bias. We do, however expect fairness, balance, professional standards of comment and factual accuracy. None of these were exhibited by the above article. To say that it rather missed the point would be an drastic understatement. 2 in 1 is, and always was, principally a PCW – PC/MS-DOC file transfer utility. Version 2 provides a much improved user interface and complementary abilities to manipulate PCW files and discs which we considered would be useful, and appreciated, as built-in functions. The extremely positive feedback we are getting from our customers and dealers suggests this is indeed so.

Your reviewer, however, appeared to virtually dismiss the main PCW – PC facilities as unremarkable and appeared obsessed with comparisons with CP/M utilities and the use of CPC discs – a minor feature added as an "extra" at the request of our testers.

This, we feel, presented a very poor and unbalanced view of the program. A typical example is the timing of file copying operations with LocoScript and CP/M's PIP, in which 2 in 1 performed about twice as slowly. This is accurate, and fair comment. What was not fair, however, was to not then explain why – that 2 in 1 is designed and optimised for MS-DOS format transfers, at which it is extremely fast. It was not designed to be a fast CP/M file copier, but a convenient one. We find it quite astounding that no tests of the program in its main role as a PCW – PC transfer program appear to have been conducted!

This is all bad enough, but the article is littered with factual inaccuracies. For example, 2 in 1 will not format a disc in 178K. Not just that, but it compounds the folly by saying that discs formatted in this way cannot be read by a PCW8256! This is imaginative fiction, not journalism.

Your reviewer appears determined to prove his case that 2 in 1 is unnecessary. To do so, further non-facts are given. For example,
"The format command, like CP/M's DISCKIT which you have already, will happily format a disc ..... as a 360K or 720K disc (depending on whether the switch on the back of the attached drive is set to 40 or 80 tracks)....."
i) DISCKIT will NOT format discs to 360K or 720K MS/PC – DOS formats.
ii) 2 in 1 is designed to format both 360K and 720K discuss on a non-switchable 80-track drive. In fact, using a 40/80 switchable drive will not work, and may damage the drive. If any customers do so as a result of reading your article, we shall instruct them to pass claims for damage to you.
Another damaging lie is the quite amazing statement that
"When you buy a drive, it usually comes with adequate software very similar to 2 in 1 anyway, free"
i) Most drives are sold by Compact Micros. They do not supply any free software. Pinboard computers do not. Silicon City supply a relatively expensive Shareware program for the PC, not the PCW, while Pace supply a very simple file copying utility – neither of these is remotely "similar to 2 in 1".
ii) Even where such software is supplied, it is often not adequate. A large number of our customers have it, and want 2 in 1 because it is substantially difference and better at what it does.

These are just two examples; there are others. In short, the content and approach of the article suggests that the reviewer did not use the program in any substantial or representative way, nor even properly read the manual.

If 2 in 1 was a mediocre program which received a fair but justifiably poor review, we would not object. This, however, is simply not so. Don't take our word – take our customers'!

The three main suppliers of drives – Compact Micros, Pinboard Computers and Silicon City – have all reviewed the program for themselves, and have reached rather different conclusions to yours. All three are selling and supporting the program as a major enhancement to the capabilities of their drives. From the sales and general comment from both their customers and ours, their conclusions would appear to be rather more accurate than your reviewer's. If you would like an unbiased, commercial opinion of the product, I suggest you ask them!

Your magazine has a position of some power in the PCW marketplace. We know from customer response in the past that comment and review in 8000 Plus does have a considerable influence. I would suggest that you should urgently consider the responsibility that this level of influence imposes.

2 in 1 is an important product, both for us and for the market. Your article has done a great disservice, to the extent that it grossly misrepresents the program's nature and capabilities.
Colin B Foster,
Moonstone Computing, Clydebank

Rob Ainsley *replies: As an experienced reviewer I hate to admit I'm wrong, but I fully accept most of Mr Foster's points and apologise to our fax machine for the ensuing jam of correspondence. Having had a little more time to re-evaluate the program I think ratings of 4/5 for range of features and 5/5 for performance – making the total value for money rating 17/20. That dud information about formats actually came from some now rather old back-copies of 8000 Plus, so we're happy to print the truth.*

The only thing I would take issue about with you is the "CPC obsession" tag – the same space in the review was devoted to the CPC as to the PC, which doesn't look to me like an obsessive imbalance.

8000 Plus: *Further to Rob's comments, we would like to add that in the next Utilities section of the Good Software Guide, we will be giving the program an extended appraisal, and of course, will include the upgraded ratings specified above. In the meantime, we apologise for any information which was misleading.* ➤

All change!

On a recent visit to my local computer shop I was advised that certain versions of the Amstrad 8000 printers should not be attached to certain issues of PCW8000 VDU's otherwise damage will result to the internal chips. Please can you confirm that all 8256 and 8512 printers are interchangeable and that all issues of 9512 are compatible with other 9512s.

I feel sure that an 8526 printer would work on my 8512 but I am reluctant to try it.

P J Feast, Redditch

8000 Plus: We tried to approoch Amstrad for this one, Mr Feast, but they proved to be their usual unhelpful selves. As far as we know, there is no reason why you cannot switch printers between 8000 series models; we do so quite frequently here in our office, with no harmful effects. The only possible reason which we can think of as to why you shouldn't carry out such an exchange is if you are attempting to swap a printer between a PCW of German or Spanish birth, and one made in the UK.

You're Nikked!

I would like to correct an error in your February review of Graflink.

"..., new desktop publishing programs have come on the scene – like Micro Design 2 for instance – offering exciting new features, but totally unable to handle picture files from Masterscan."

"Micro Design 2 and Masterscan can now work together, thanks to Graflink".

"For those people wanting to use Masterscan with DTP packages, Graflink is a must."

The original Masterscan program can save picture files in a variety of different graphics file formats, including what it calls "DTP" format. This is the "GRT" file format used by the Desktop Publisher program, and Micro Design 2 can load graphics files in this format. It is not, therefore, necessary to have Graflink in order to use Micro Design 2 with Masterscan and we have an enormous number of users who have been combining the two systems for a very long time.

The only advantage of Graflink is that is uses the Masterscan hardware to scan a longer image than was previously possible with the original software.

Secondly, some confusion seems to have arisen as a result of the way in which last month's official press release about the new Micro Design 2 package for the IBM PC was combined with unofficial information about a supported new PCW release. The statement that a package called Micro Design 3 is 'in production' is completely untrue. We can state categorically that although all of our products are under continuous development, we do not intend to release a new version of Micro Design for the PCW in the near future.

We can also confirm that both Micro Design 2 and ProSCAN work with Cirtech's new 'Sprinter' boards. There are some small anomalies with keyboard repeat and scanning speeds, but these do not significantly affect program performance.

Nik Holmes, Creative Technology

8000 Plus: Consider us corrected, Mr Holmes.

Draft excluder

Can you tell me how to get a screen dump to printer in CP/M et al in draft quality? The toggled choice on the PTR line appears to select 'draft' quality but the printout persists to be in NLQ, wasting both time and ribbon. Is the problem:

1. Some shortcoming in the software,
2. a deliberate ploy by shareholders in re-inking firms,
3. a job for SID (shudder, shudder) or, most likely,
4. an idiot computer operator?

The second matter relates to "Listings". Not being a programmer at any level of competence, I can imagine that one of the problems facing those with both time and skill is to find a useful function for which to write a program! Would you therefore be interested in publishing suggestions from illiterate (in BASIC terms) readers who have the idea but lack the know how?

For example, I imagine it would not be too difficult to construct a small program which would record petrol purchases in litres plus odometer readings and produce a running statement of mpg.

Thank you for your time and for masterminding such a good magazine. Would that it were fortnightly so that there was less of a wait to pounce on the postman for the next edition!.

F R Peacock, Essex

8000 Plus: Screen dumping does not actually adhere to the usual criterion observed by normal document printing. So, when you see that 'draft' is selected on the PTR line, it is actually misleading. A screen dump is a dot by dot reproduction of the information which you have on the monitor, and the process, unfortunately, cannot be made any less time – or ink – consuming. Sorry about that!

As for the idea about a kind of ideas/solutions pool for BASIC programs, you have a good point; some such enquiries find their way in to the pages of Tipoffs, but the sheer volume of correspondence which we receive for those pages means that many readers are left with their problems unsolved. What do other readers think?

Bonjour...Salut..Hola!

I own an Amstrad PCW 8512 with LocoScript 2. I am interested in obtaining Thesaurus programs in French and Spanish which I can use on my Amstrad.

Can you tell where I should look to find any such program suitable for use on my machine.

E W Hawkins, North Humberside

8000 Plus: As far as we know, there are no such programs currently available for the PCW. There is an English thesaurus produced by Three Inch Software (081 546 2754), and there was also one within the now upgraded Mini Office Professional. General opinion, however, seems to be that it is cheaper, easier and indeed quicker, to use a paperback version...unless, of course, anyone out there knows different!

Ribbon race

With regard to your excellent article, Refresher Course, regarding the use of "Re-Ink" by Lateral Developments, diligent search through the magazine failed to produce their address ..... (Nor could British Telecom).

Could you kindly let me have it?

Rosemary Rawlins, High Wycombe

8000 Plus: But of course. A can of Re-Ink can be obtained by writing to Lateral Developments, Freepost, Poole, Dorset BH15 2BR.

Key-bored

It is now nearly 3 years since I last wrote to you, during which time I have continued to use my PCW8512 with great success.

Recently, a friend loaned me his PC complete with 80286 processor and LSPC package.

I have now used the machine for about three weeks and although it has obvious advantages in terms of speed and in-built facilities (database etc.), it also has certain disadvantages from an operational point of view.

In truth, I have only ever had one serious complaint about the 8512 (forget the speed because, at the end of the day, my daisy wheel only prints out at 20 cps anyway!!) and that is the keyboard. It has a total lack of 'feel'. My question to you, as the great Amstrad Oracle, is, has any bright soul come up with a decent compatible (clicky) keyboard to work with the Amstrad, and if so, would you please supply me with the necessary details.

I would be delighted to give MS DOS the order of the boot (pun partly intended) once and for all!!

Please continue with your excellent magazine.

A J Helsirip, Cranleigh, Surrey

8000 Plus: Sharpen those hobnails, Mr

Helstrip, for good news is on its way. A bright soul has come to the rescue of all – and there are many – of you who are unhappy with the native PCW keyboard. Turn to our News Plus pages for more details, and stand by for a good ol' 8000 Plus review of the new product next month! One more word of advice; don't get your cheque book out just yet: we may just have some of the new keyboards to give away...

Overloaded?

Having read with great interest 8000 Plus, featuring attractive items such as the Vortex hard disc and earlier, the Pro·Scan package, I have a concern which, as far as I am aware has not been tackled.

Like me, I suspect that many users of Micro Design 2 will also be users of a mouse. That's fine if you also use a 24-pin printer, especially if it is the AMX rodent, as that mouse interface has a through port. At this point a major problem appears to arise.

How do you link up the interfaces for ProSCAN and a hard disc as well? The interface for my printer has no through port and making the far from reasonable assumption that the other interfaces did then how could you recommend fixing this 'trunk' to the computer expansion socket so that it didn't wave about?

T P A Day, Newport Pagnell, Bucks

8000 Plus: *It seems as though you must continue the juggling act until such time as a remedy is found...which , you'll be pleased to hear, is not too far in the future. See News Plus for more details!*

Opting out?

I have today received my long awaited copy of the 8000 Plus Soft Options disc. As I only have an Amstrad 9512 single drive, I am unable to make the necessary copy of this disc in either LocoScript or CP/M. Please advise

G Smallman, Herts

8000 Plus: *Certainly. All you need to do is to put your CP/M disc into the drive, type in '8000 copy' at the prompt, and then follow the step by step instructions on screen. Incidentally, for all you other Soft Options disc owners, there will be a special 'clinic' in next month's issue to help you navigate your way through the programs on the disc.*

A cut above

8000 Plus is full of so many good things that one cannot throw away a single copy and even with binders it takes up a good deal of space. So I have committed the ultimate sin and cut out what I think to be the most interesting and useful pages, putting them into a ring binder, divided into sections under the headings (so far) of "Basic, Listings, LocoScript, Maintenance and Tip-offs".

That done, I have prepared an index, so that should I need to refresh my fast-failing seventy year-old memory on some particular point, I can have the binder within easy reach and look it up rapidly.

Not that I have thrown away what is left – I may wish to check an advert or something of the sort in the future – but those remainders can now be stored carefully in some slightly less accessible place.

I make no claim for inventiveness, nor would suggest that those are the only possible section headings – they just happen to suit me at the present time. Keep up the good work.

C H Simmons, Wallingford, Oxon

8000 Plus: *Aaagh! Sacrilege! No, seriously, thanks for telling us and others about your ingenious indexing system, Mr Simmons. For those who cannot bear to dismember their copies of the magazine, they can use the annual index (last published in our September 1990 issue) to pinpoint certain features or articles. The next one is due in a mere six months' time, but if anyone would like the latest one, an SAE despatched to our offices in Bath will bring you a copy.*

Tipping down

I received acknowledgement of my subscription to 8000 Plus and received the The 8000 Plus Tips Collection, which reads interestingly enough, however, when I place the disc into my PCW8256, I cannot get any response except the message "Not a Locoscript Document". I booted up in Loco 1 and Loco 2 with similar messages coming through.

Is there something I should be doing? Or is it the disc? I await in hope for your reply please.

Tom Flanagan,
St Albans, Herts

8000 Plus: *All you need to do is to boot the PCW up with CP/M – and then follow the instructions in the booklet. Here's to many an hour of successful experimentation! If anyone else would like to obtain a copy of the Tips Collection, turn to our catalogue of Special Offers on page 82 of this issue.*

Mouse in the house?

My Department has Amstrad PCW 8256s and last year we bought an AMX mouse with the Stop Press desk top publishing package – which we were very pleased with. However, we have since 'lost' the small black roller ball from the bottom of the mouse that makes the mouse move along – so we are unable to use it.

Can you please advise us if we can get a replacement, and where from.

Jane Cheasley
I T Teacher,
Cotham Grammar School, Bristol

8000 Plus: *This is a problem which seems simple enough to solve, but is quite likely to be very difficult! You could try contacting the manufacturers, but it's odds on that they will tell you to buy a whole new mouse. Perhaps some of our readers can help?*

Seeing stars

Until I read the excellent articles by Ms Karen Donaghay revealing the mysteries of "Cracker II" in recent issues, the Cracker manual had been as useful to me as an ashtray on a motor-cycle. The articles were easy to follow, even by me, and I got my spreadsheet with only a few stumbles. But my pride in the new creation was shattered when instead of total figures for the year and a grant total, I saw two rows of stars. These, I decided, were a macro and there is the rub – or perhaps I should say I cannot decide how to rub them out and substitute some nice familiar digits.

May I ask Ms Donaghay to interpret and reveal the secret for me. Knowing that the system is correct and that mastery of 'macro' will disclose some hidden joy, is not much help at the moment.

F C Dorey
North Harrow, Middx.

8000 Plus: *You'll be pleased to learn that nothing so complicated or awesome as the Mighty Macro is responsible for your row of stars, F.C. Believe it or not, what is happening is actually an example of Cracker prompting you to correct a 'human' error, and it is, we're afraid, one such error which is in evidence here. When a formula is used in your spreadsheet, Cracker checks that every cell mentioned in that formula actually contains a value. If it doesn't, the program 'reminds' you to enter a value by displaying stars in the neglected areas.*

So, all you have to do is to go back and fill in the figures, and your problem will be solved.

Take heed...

I have recently bought a PCW 8256 and in the two weeks that I have had it I must say that I am more than pleased with it. But I am not writing merely to sing the praises of Amstrad's machine. I have a cautionary tale to tell.

For a while I looked around for a word processor and sought the advice of "experts" on the matter. These "experts" were salesman, shop owners and managers and so on. I know little about worked processors and so relied on the guidance of these people very heavily.

In trying to decide between the ➤

range of products on offer to my fairly limited budget I asked about various aspects of them and found myself thinking that there was little difference between the top of the range processors such as the 8256 and its rivals.

How wrong I was and, perhaps, more importantly how wrong the "experts" were.

I asked the advice of people in computer, office suppliers, department stores, electrical goods shops etc etc and none of them were aware of the functions the 8256 could perform in addition to word processing. I even put the question specifically to some of them: "Can you program it with business software, games, graphics programs?" The answer was the same from each of them "It's just a word processor", "Have you got a brochure?", I enquired. None of them had one.

And so, knowing no better, I believed them. In fact, I was on the verge of buying one of the more expensive typewriters when, quite by chance, I came upon 8000 Plus in the local newsagents. A whole magazine devoted to "just a word processor"? I looked inside and discovered that the PCW8256 could do all I wanted it to – and more!

So, as I learn to find my way around my 8256, be warned Amstrad; there are a lot of retailers out there who ought to know better about the capabilities of your PCWs and there must be a fair number of lost customers sitting at their typewriters with their miniature screens and word processor functions who weren't as fortunate as me.

And thank you, 8000 Plus, for the eleventh hour rescue.

Justin Daines, Southcote, Reading

8000 Plus: *And all because the salesman loves...commission.*

Back in a minute

I have been using an Amstrad 8512 for several years. Over this time I have accumulated 30 or so discs each of which contains either the 'top or the 'back-up' copy of files I wish to keep. As these files become older and the time since they were last put onto disc longer, I worry that the data may become corrupted by the weakening of the magnetic signal. Assuming that this is a real problem, I could, of course, enter LocoScript and call up each file in turn and then, by pressing edit, lay it down again afresh, but this would be extremely tedious and time-consuming. More simply I could copy each disc in turn, but even this is time-consuming and would require all the discs to be re-labelled!

Years ago, when working a mainframe, we used to have a small program that automatically called up all our data files in turn, read them and re-files them simply in order to bring their 'date-stamp' up to date. Is there any such program that could be used with LocoScript files which would simply work its way through all the files on a disc without any intervention from me?

Andy Stillman
Dorchester

8000 Plus: *Opening all the files again will not prevent the problem which you are worried about, Andy; the editing process refreshes data, but not the disc's address marks, which are vital to the preservation of your files. We spoke to Dave Smith (the Dise Doctor) about this one, and he strongly advises that however laborious it may seem, the only sure way to protect your data is to copy the files on to another disc, and then reformat the original. This will ensure that the address marks are refreshed, and your data is well and truly protected. The only thing is, that you really need to do this about once every four months for absolute peace of mind about the safety of stored information.*

The other tip is, of course, to make sure that your discs are stored in the most ambient conditions possible – put them anywhere near the source of a strong magnetic signal, and you're asking for trouble!

Gifted?

I have a PCW 8256, unexpanded, with the standard printer. As I had Micro Design 2 from Santa, the standard memory restricts the use somewhat. However, I have been offered a hard disc drive salvaged from redundant equipment, and would like to know if it is possible to fit it to my PCW. I am told that it is a Bull 585, and that is all the info I have. Perhaps you could tell me if it is possible to fit this bit to my PCW, and perhaps how. I think your magazine is great – I only wish I had read it before I bought my machine from Dixons.

Several of your advertisers would have supplied the same machine and software for a lot less loot.

Robin A Clarke
Newark, Notts.

8000 Plus: *Unfortunately, you will not be able to use the hardware that you have been given, Mr Clarke. Bull manufacture hardware for mainframe systems, and it is not PCW compatible. It looks as though you'll either have to expand your 8256, or look out for a moderately priced hard drive (such as the new Vortex 2000 from SCA Systems, reviewed in our February 1991 issue) in the pages of 8000 Plus. Sorry!*

Ink trials

"It's not difficult, it's not messy, and it will save you money". Fine. Contacted Caspell Computer (full page ad on the inside back cover), my telephone order for Re-Ink came by the next morning's post. Very good.

Saturday afternoon, kitchen table covered with newspaper, three 8256 ribbon cassettes carefully opened and strategically laid out. A good long shake and check illustration 4. Nothing but air from the nozzle. Carefully raise one end of a cassette and pump again. Eureka!! Black Jet on to the ribbon, also black fluid filling the recess at the top of the canister and oozing between the finger of the right hand. Swarfega to the rescue and pinch the rubber gloves reserved for washing up.

The beast will only operate at an angle of a few degrees from the vertical. After a few pumps it seizes up, further vigorous shakes restore movement. Aiming the nozzle is quite tricky and the cassette must be held at an angle of not less than 45 degrees. The amount of goo running down the outside of the canister seems to be greater than that getting on the ribbon.

Taking into account the price of replacement rubber gloves, the unpleasantness of the spray getting up one's nose, my handkerchief (which after a sneezing session looked like a coalminer's), the time needed to clear up the mess, I am rather doubtful of the success of the operation. The ribbons are being given a week to dry out.

I believe it is illegal to send leaking parcels through the post, so I shall have to content myself with a letter to Caspell Computer.

Robert H M Harcombe, Hereford

8000 Plus: *Is the weather always this heavy in Hereford? Sorry to hear about your misadventures with Re-Ink, Mr Harcombe; I am sure that with a new pair of rubber gloves, your problems will be over. Lateral Developments remind us that a pump action spray can be tricky to get used to, and that the best way of getting a perfect technique together is to give the can a few preliminary pumps, as it were, before applying the ink to the ribbon. They also assure us that of the thousands of cans of Re-Ink despatched, a mere handful – and they've got small hands – have been officially designated as faulty. The company are also more than happy to supply replacements if a can is genuinely faulty. The rest is down to practice! Thank you for your letter – it gave us all a quiet chuckle.*

Twin joys

May I, on behalf of The British Red Cross Society and myself, thank you for the advertising you have so freely given to our twin column printing program. You may be pleased to learn that it has already raised over £100 for the Society, and discs are still coming in. Thank you very much indeed.

Gerald Lewis, Penryn

8000 Plus: *Only too pleased to oblige, Mr Lewis; if anyone wants more details, send an SAE to 3, Poltair Drive, Penryn TR10 8NY.*

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I think, therefore I am - a BrainStorm user

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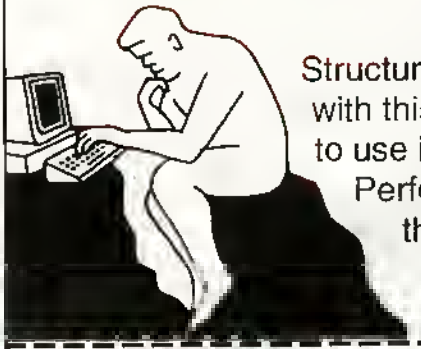

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Competition

Store the correct information in the correct place on our crossword grid, and you could win a database of your very own!

Winning LocoFile could be the perfect way to bring order to your administrative chaos

If your filing system consists of a shabby collection of dog-eared envelopes, and your address book is a battered arrangement of loosened pages clutching on to life by a broken staple, then you are not alone. Administration is the bane of many peoples' lives, and as such, is usually relegated to last position on the list of 'things to do'.

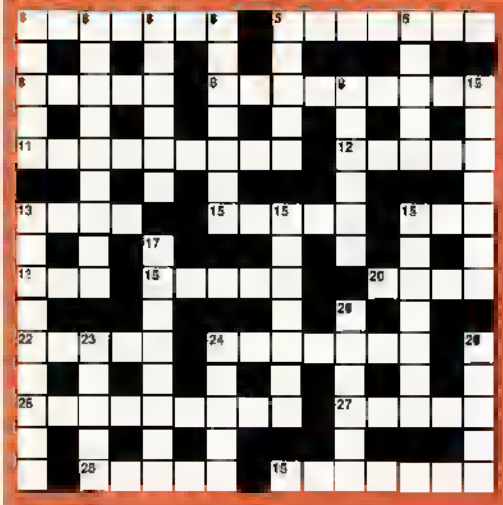
However, as the owner of a PCW, you are half way on the road to reform. And with the addition of a database such as LocoFile to your software collection, you can prepare to say goodbye to the fleet of shoeboxes which govern your personal administration.

LocoFile comes from the same 'family' as LocoScript, and is controlled by the same, easy to use pull down menus as its word processor cousin.

Of course, it's not just names and addresses which LocoFile can store for you. All sorts of information can be kept close to hand - details of record collections, club membership lists, customer records for your small business - the list is endless.

Locomotive Software have very kindly donated three copies of LocoFile for the prizes in this month's Back Page competition. But their generosity does not stop there. PCW 8000 series owners, if they are picked out of the hat, will also receive a free copy of LocoScript 2, from which LocoFile runs. And that's not all; if you turn to page 24 of this issue of 8000 Plus, you will see the first in a brand new tutorial series on LocoFile. So, not only will this month's competition winners gain access to an excellent database, they will also have expert 8000 Plus tuition to help them get the very best out of the program. What could be better?

All you have to do is to send your solution to our crossword (together with your machine type), on a postcard, to: Crossword Competition, 8000 Plus, 30 Monmouth Street, Bath BA1 2BW. Entries to arrive no later than 28th March 1991. Good luck!



Across

1 The company that makes all this possible (7)
5 Survivors' word processor? (7)
7 Around, approx, a boxing match? (5)
8 Sweet crop that should be given to unhelpful dealers? (5,4)
11 Kept away from each other (9)
12 Part of a mended computer. Makes things better (5)
13 Take note. Part of the Editor (4)
14 Make hard copy (5)
16 Initially ask for price on application (1,1,1)
18 Advanced memory systems, in short form (1,1,1)
19 Come inside and put some information into the computer (5)
20 Central part of Apple?
22 Railway engines, part of LocoScript file (5)
24 Thrown one causes damage in works (7)
26 Silent, like the 9512 printer isn't (9)
27 This bloke is in printer jam escape bid (5)
28 Align, get ready, prepare for use (3,2)
29 Wish many happy ones to your printer on its birthday? (7)

Down

1 Whose company is this? It's ... (5)
2 Arresting printing device, DTP package (4,5)
3 Singular one of 29 (6)
4 Where publishing packages are to be found? (7)
5 4th page, alphabetically, called for (5)
6 Avoid, as income tax payments (5)
9 Actor does it again? (set car) (6)
10 Closing stages of chess contest in 'send game' request (7)
13 Large print items in newspaper? (9)
15 Intrusions, invasions, part of new thin roads computer car (7)
16 Coded instructions (7)
17 Printer stopped? perhaps waiting for one of these? (3,5)
21 Type of printer (6)
23 Integrated circuits with everything (5)
24 Insomniac's counting system? (5)
25 Birds and FOR NEXT loops can live in these (5)

NEXT MONTH!

Flipper 3

Next month, 8000 Plus brings you an exclusive showing of Flipper 3, the brand new upgrade of Software Imperative's top selling PCW utility. Flipper 3 allows you to switch between up to eight - yes, eight - environments at the touch of a few keys. What's more, the program will now be completely self-booting, and entirely menu-driven - two important ingredients for extra speed and ease of operation. Don't miss it!

Script Writing - the PCW way

Many's the time, we're sure, that you've drifted away from The Archers and into your own reverie with a fantastic idea for a screen or radio play. But how do you go about producing the script? Who do you send it to? What format should it take? The April issue of 8000 Plus reveals all - plus, how you can summon LocoScript to your assistance to show off your creative talents to their very best advantage.

Canon BJ-10e

The PCW's native printers are adequate for most tasks, but when it comes to keeping the noise levels down, they leave a lot to be desired. Next month, we will be taking a look at the Canon BJ-10e, the quiet, smooth-running bubblejet printer. Not only is the BJ-10e silent, it is also fully portable! But how do you get it to work with LocoScript? What about compatibility with other programs? No stone is left unturned in April's in-depth review.

Daisy Pains

When your output goes decidedly smudgy (or disappears altogether), and you've only recently replaced your ribbon, then it could be the 9512 printhead which is at fault - and time to call the repairers. But wait! Help is at hand in next month's issue, with a fully illustrated guide to carrying out minor repairs to your printhead. It's not as difficult as it sounds, and it could save you hard cash at the repairers. So, stand by for April's easy to follow guide.

The April issue of 8000 *PLUS* will be on sale from 28th March Order your copy now!

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PAPER

BEST QUALITY white, wood free - LOW DUST specification

11x9.5"	60gsm	FANFOLD LISTING	2000	£13.95
11x9.5"	70gsm	MICROPERFORATED	2000	£15.95
11x9.5"	85gsm	LETTER QUALITY	1000	£10.95
A4 size	70gsm	MICROPERFORATED	2000	£19.95
A4 size	85gsm	LETTER QUALITY	1000	£11.95
11x9.5"	NCR	2-PART PLAIN	1000	£21.95
11x9.5"	NCR	3-PART PLAIN	700	£24.95

...and of course there's our own UNIQUE A5 continuous paper

A5 size	80gsm	LETTER QUALITY	1000	£11.95

LABELS

TOP QUALITY FANFOLD LABELS FROM AVERY

ADDRESS SIZE: 3.5 x 1.5" available 1 or 2 across

2.75 x 1.00"	£2.75	4.00 x 1.00"	£3.40
2.75 x 1.50"	£3.70	4.00 x 1.50"	£4.50
3.50 x 1.00"	£3.15	4.00 x 2.00"	£6.50
3.50 x1.50"	£3.75	5.00 x 1.00"	£3.95
		5.00 x 1.50"	£5.95
3.50 x 2.00"	£6.30	5.00 x 2.00"	£7.50

- ALL PRICES ARE per 1000 -

CARRIAGE - Paper and Labels are subject to an extra charge towards delivery.- PLEASE SEE BELOW

PERSONAL ORGANISER PAPER

NEW

Fanfold paper for your organiser!
Use with LocoScript etc or specialist programs!
6.5-in deep (39 lines) by 3.75-in wide + edge strips
80gsm white paper with microperfed edges.
250-pack £8.95, 500-pack £14.95 Inc VAT & post

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THE VERY BEST - maxell CF2 3" HIGH GRADE DISKS
suits all 3" drives, single or double density

5 for just **£11.50** 10 for just **£21.95**

20 for just **£43.90** plus FREE.....
LOCKABLE DISK BANK (holds 20+) WORTH £9.95

*CF-2 Disk labels: £2 per 50 when ordered with other goods.

ACCESSORIES

DUST COVER SETS: - protect your computer from lites little mishaps - Coffee/Children/Pets/Dust. Machine washable
9512 ★ 8256 ★ 8512 **£9.95**

PCW 9512 DAISYWHEELS - All styles £5.95 ea.

THE DESK TOP STRIPPER ! - strips the perforated edges from fanfold paper. VERY USEFUL our price. . . . £9.95

RIBBONS

ALL TOP UK BRANDS

8256	Black fabric std	2741FN	£3.95	Band B
8256	Fabric LONGLIFE	2741LL	£4.95	Band C
*8256	Fabric colours	2741Col	£4.95	Band C
8256	Multistrike films	2741MS	£3.95	Band B

8256 ribbons also suit the 8512

We recommend FABRIC ribbons for these printers

9512	Black fabric std	2746FN	£3.95	Band B
9512	Fabric LONGLIFE	2746LL	£4.95	Band C
*9512	Fabric colours	2746Col	£4.95	Band C
9512	Multistrike films	2746MS	£3.95	Band B

Multistrike films are the kind supplied with new 9512's but FABRIC ribbons can be used with Re-inK, to further increase the printing life of the ribbon.

LIFETIMES: Multistrike Films 100K chars
Fabric std 400K chars
* Fabric LONGLIFE 750K chars

COLOURS AVAILABLE 8256/9512: - Blue/Brown/Red/Green

Buying more than one ?	2 - off	5 - off
Price Band B	**£7.45**	**£16.95**
Price Band C	**£8.95**	**£19.95**

Still throwing your old ribbons away?

FABRIC RIBBON RE-INKING FORMULA

a future-friendly product from OFFICE-21

introducing

Re-inK

Simple, easy re-inking at home!

One can will Re-inK up to 30 PCW ribbons or top-up 100+!!

- ✓ *Completely ozone-friendly*
- ✓ *Contains NO propellants or harmful solvents*
- ✓ *Recycleble aluminium can*
- ✓ *Superb quality dense black ink*

only £12.95 inc vat

All fabric ribbons have press-on tops . . . Just lift off the top, sprey on a teaspoonful or two of ink and leave to dry. For CLEAN, CLEAR, BLACK PRINT . . . again and again and again . . .

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★ ★ ★ **this month's special offer** ★ ★ ★

PCW DRAW a full function drafting program RRP . . £39.95 **our price. . . £29.95**

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LocoScript 2	£27.95	Stop Press	£39.95
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4 - LINES ★ 24 hrs

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PAYMENT
CHEQUES - made payable to CASPELL COMPUTER VISA and ACCESS POSTAL ORDERS

DELIVERY UK MAINLAND	PAPER (except Personal Organiser) (any quantity)	LABELS (any quantity)	EVERYTHING ELSE (any quantity)
3/5 DAY SERVICE:	£5.00	£2.50	£ FREE
NEXT DAY SERVICE: (orders placed by 3:00pm)	£10.00	£10.00	£10.00

OVERSEAS: (optional insurance) Surface shipping at cost

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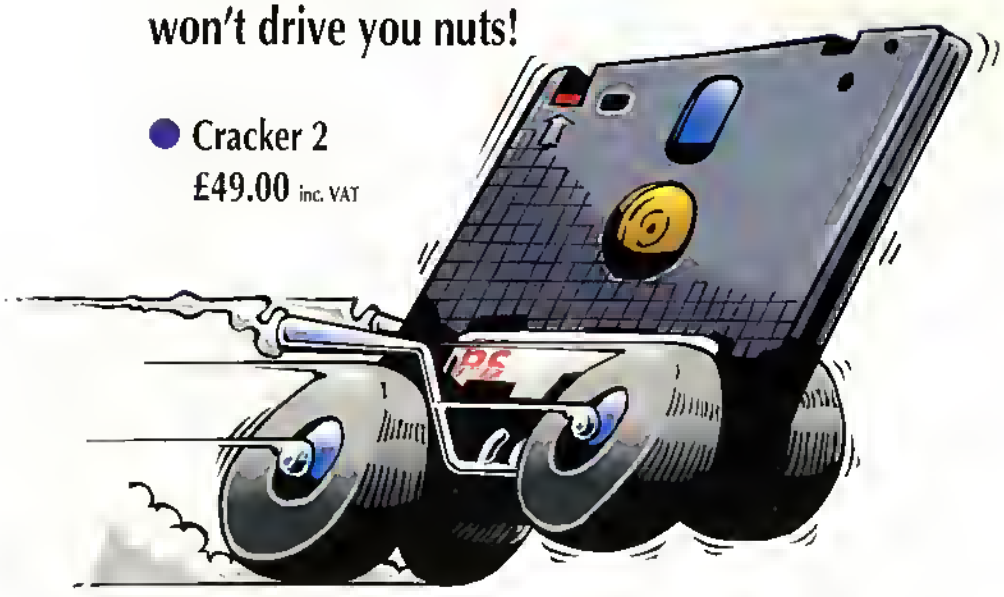
COPIES OF OUR TERMS OF TRADING ARE AVAILABLE UPON REQUEST. ALL OFFERS ARE VALID FOR 28 DAYS

Cracker 2 turbo

The spreadsheet for the PCW which won't drive you nuts!



- **Cracker 2**
  £49.00 inc. VAT

Cracker 2 turbo is the powerful, user friendly graphics spreadsheet specially written for the PCW 8256, 8512 and 9512. Fast and easy to use, with a wide variety of graph styles, why settle for a text-only spreadsheet when the best costs less?

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- Cracker 2 Turbo supports 55 columns by 255 rows
- Makes full use of the PCW 32 line screen
- Extensive graphing capabilities
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